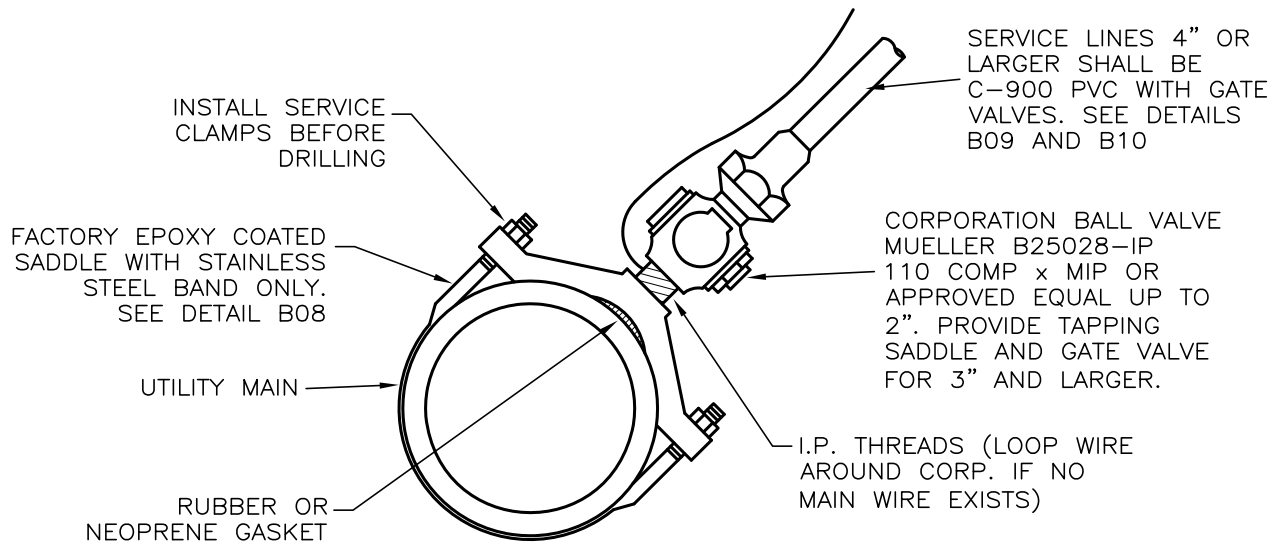
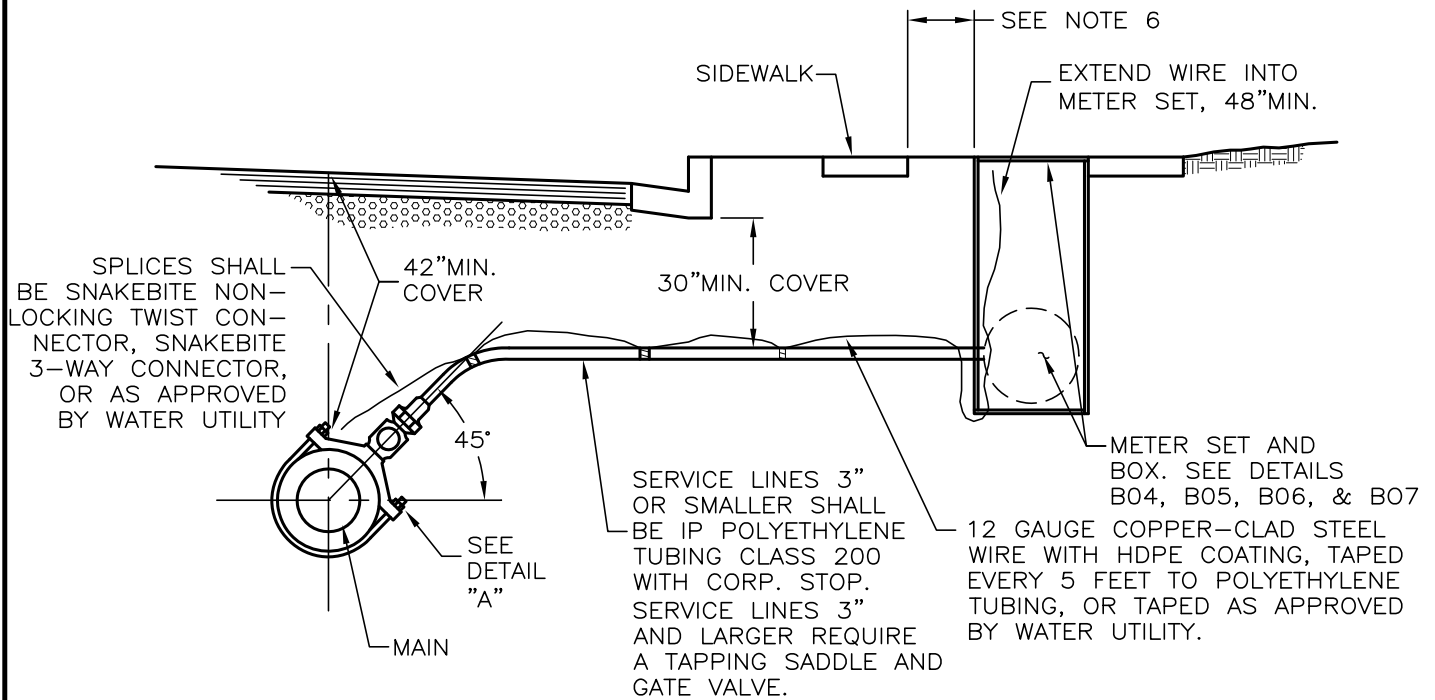


NOTES:

1. BACKFILL SHALL CONFORM TO THE REQUIREMENTS OF CLASS E BACKFILL AS SPECIFIED IN SUBSECTION 200.03.06 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. MATERIAL SHALL BE PLACED IN LIFT THICKNESS SPECIFIED IN SUBSECTION 305.10 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND DENSIFIED TO 90% RELATIVE COMPACTION.
2. BEDDING SHALL CONFORM TO THE REQUIREMENTS OF CLASS A BACKFILL AS SPECIFIED IN SUBSECTION 200.03.02 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. MATERIAL SHALL BE DENSIFIED TO 90% RELATIVE COMPACTION.
3. CLASS C BACKFILL OR OTHER GRADATION AS APPROVED BY WATER UTILITY, WITH FILTER FABRIC MAY BE USED TO SUPPORT BEDDING IN HIGH GROUNDWATER OR UNSTABLE SOIL CONDITIONS WITH THE APPROVAL OF THE WATER UTILITY. FILTER FABRIC SHALL BE WRAPPED AROUND BEDDING SECTION WITH 2 FOOT OVERLAP ON TOP.
4. FOR STRUCTURAL (PAVEMENT) SECTION, SEE "STREET CUT REPAIR" DETAIL A14.
5. SHORING OR SLOPED CUT SLOPES MAY BE NECESSARY. ALL EXCAVATIONS SHALL CONFORM TO THE MOST RECENT OSHA REQUIREMENTS.
6. PLACE WARNING TAPE 1 FOOT ABOVE WATER AND RECLAIMED WATER PIPE.
7. WATER STOPS SHALL BE USED IN HIGH GROUND WATER CONDITIONS PER "WATER STOP" DETAIL B02. FOR WET TRENCH BEDDING SEE DETAIL CO1.

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NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION:
			WATER & RECLAIMED WATER	DOUGLAS COUNTY
			TRENCH EXCAVATION & BACKFILL	DATE: DRAFT
				DWG: B01



DETAIL "A"

SEE NOTES ON PAGE 2

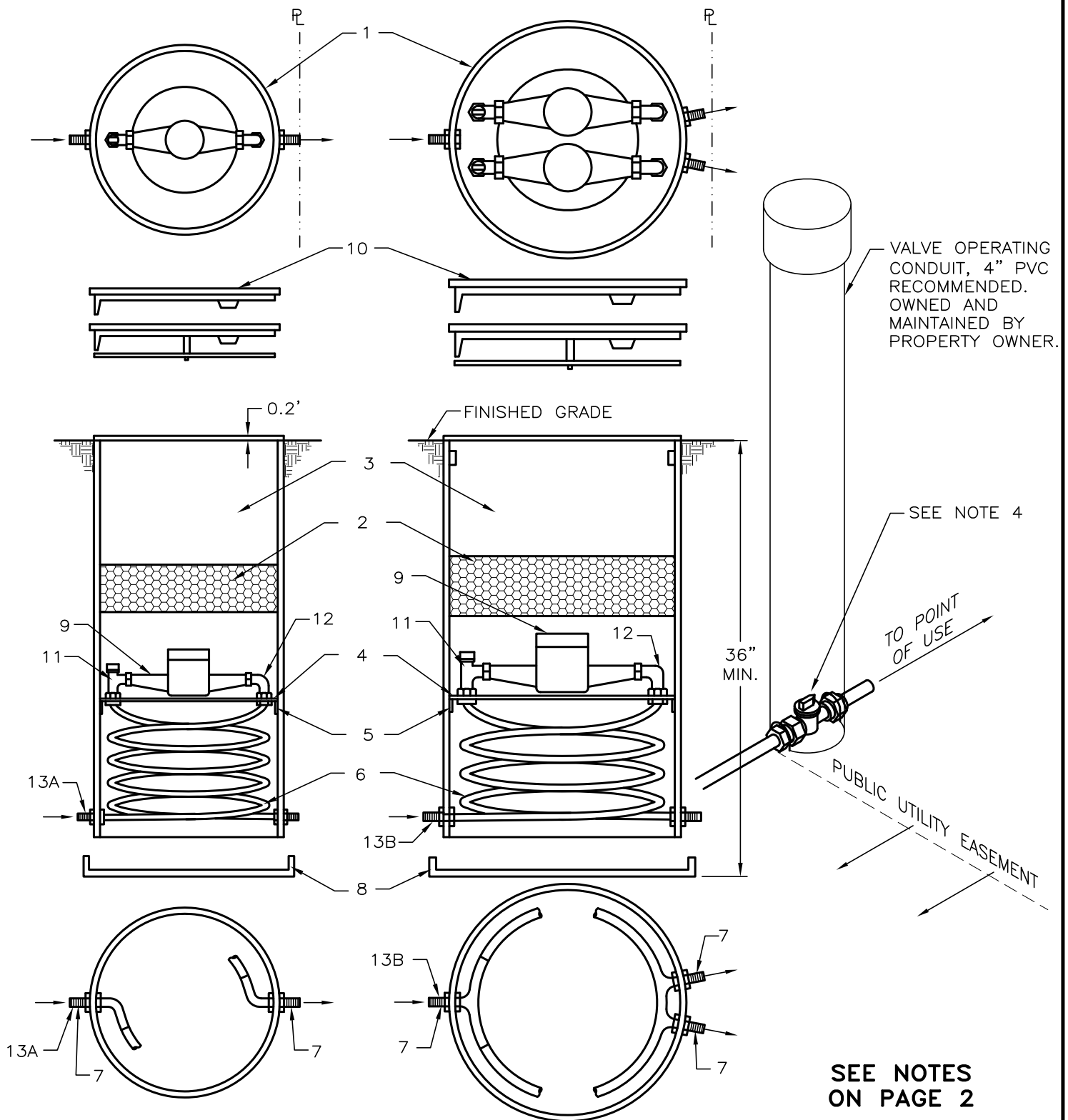
NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION:
			WATER SERVICE	DOUGLAS COUNTY
				DATE: DRAFT
				DWG: B03

NOTES:

1. ALL APPURTENANCES SHALL BE AS SPECIFIED, UNLESS APPROVED AS EQUAL BY WATER UTILITY.
2. ALL SERVICE LINE COUPLING FITTINGS SHALL BE MUELLER IPS 110 COMP x MIP. ALL POLYETHYLENE SERVICE LINES SHALL MEET REQUIREMENTS OF AWWA STANDARD C901. A STOP AND WASTE VALVE MUST NOT BE USED ON A SERVICE LINE WITHIN THE RIGHT-OF-WAY, BETWEEN MAIN AND METER.
3. ALL SERVICE VALVES SHALL BE SAME SIZE OR LARGER THAN SERVICE LINES (ON 3-INCH SERVICE, USE 4-INCH GATE VALVE AND PIPE).
4. SERVICE CLAMPS SHALL BE FACTORY COATED EPOXY WITH STAINLESS STEEL BAND.
5. THERE SHALL BE A MINIMUM CLEAR DISTANCE OF 18-INCHES BETWEEN TAPS AND FITTINGS, INCLUDING MAINLINE JOINTS AND BELLS.
6. ALL METER SETS TO BE PLACED 12-INCHES FROM BACK FACE OF SIDEWALK. IN AREAS WHERE NO SIDEWALK IS PRESENT, THE METER SHALL BE LOCATED AT A POINT AS CLOSE AS PRACTICABLE TO THE PROPERTY LINE, ALLEYS, OR EASEMENTS. ALL METER SETS SHALL BE PLACED WITHIN THE PUBLIC RIGHT-OF-WAY OR PUBLIC UTILITY EASEMENT.
7. TAPPING SLEEVES 3-INCHES OR LARGER SHALL BE STAINLESS STEEL, HAVE A FULL CIRCUMFERENTIAL SEAL AND HAVE EITHER A STAINLESS STEEL OR DUCTILE IRON FLANGE. SEE "TAPPING SLEEVE" DETAIL B09.
8. UPON ABANDONING OF SERVICE TAP, WATER UTILITY SHALL BE NOTIFIED SO THAT THE EXISTING METER CAN BE REMOVED.
9. ENTITY REQUESTING ABANDONMENT SHALL REMOVE EXISTING METER BOX AFTER COORDINATION WITH WATER UTILITY AND EXPOSE CORP STOP FOR SHUTOFF. ALL PLUMBING SHALL BE DISCONNECTED FROM CORP AND PLUGGED AT BOTH ENDS. WATER UTILITY SHALL BE NOTIFIED FOR INSPECTION OF CORP ASSEMBLY PRIOR TO BACKFILLING.
10. ALL APPURTENANCES SHALL MEET THE CURRENT ADOPTED EDITION OF THE UNIFORM PLUMBING CODE (UPC).
11. EACH SERVICE LINE SHALL HAVE A CURB STOP OR METER STOP IN ADDITION TO THE CORPORATION STOP.
12. A "W" SHALL BE STAMPED ON THE CURB FACE AT THE LOCATION OF THE LATERAL CROSSING THE CURB LINE.

PAGE 2 OF 2

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION:
			WATER SERVICE	DOUGLAS COUNTY
				DATE: DRAFT
				DWG: B03



15" DIAMETER THERMAL COIL METER BOX FOR SINGLE PIT SETTER

18" DIAMETER THERMAL COIL METER BOX FOR 3/4" DOUBLE, 1" SINGLE PIT SETTER

SEE NOTES ON PAGE 2

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			3/4" SINGLE & DOUBLE SERVICE PIT, 1" SINGLE SERVICE PIT	DATE: DRAFT
				DWG: B04

NOTES:

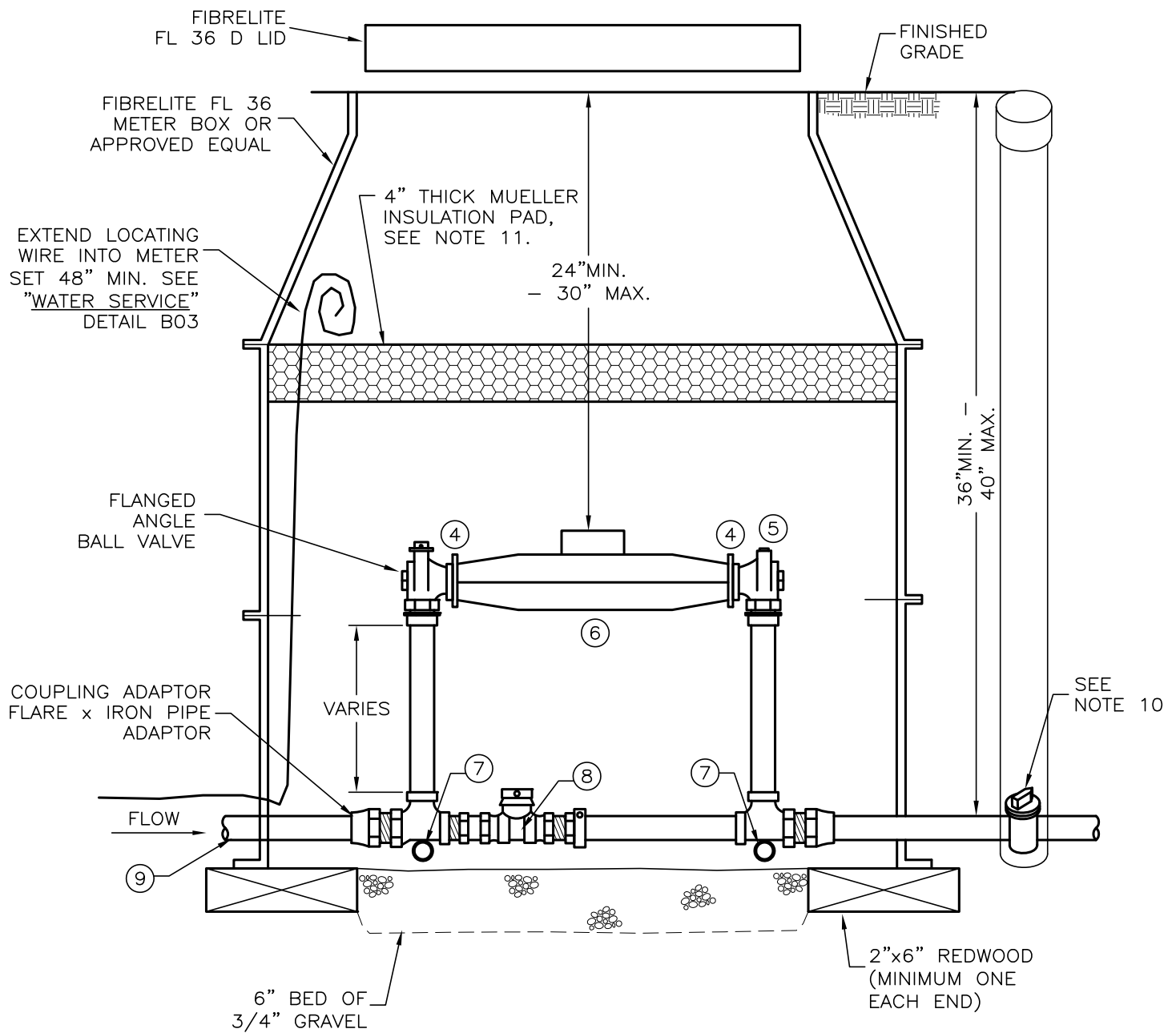
1. SERVICE LINE SIZE AS REQUIRED BY WATER UTILITY (3/4" – 1") WITH COUPLING ADAPTOR.
2. PIT SETTER EXTENSION SHALL ONLY BE USED UPON APPROVAL BY THE WATER UTILITY.
3. RIGHT HAND SERVICE PIPE ON DOUBLE METERS TO BE COLOR CODED OR STRIPED.
4. A CUSTOMER SHUT OFF VALVE ON THE DOWNSTREAM SIDE OF THE METER MAY BE REQUIRED BY WATER UTILITY; CONTRACTOR TO VERIFY WITH WATER UTILITY.
5. ALTERNATE DESIGNS ARE REQUIRED WHERE METER BOX IS WITHIN DRIVEWAY OR OTHER TRAFFIC AREAS.
6. TOP OF METER PIT SHALL BE SET 0.2 FEET (2.4 INCHES) ABOVE FINISHED GRADE.

PARTS KEY:

1. PVC BOX, MINIMUM WALL THICKNESS 0.300".
2. MUELLER 4" THICK INSULATION PAD.
3. AIR SPACE.
4. PLATFORM.
5. PLATFORM SUPPORT.
6. POLYBUTYLENE TUBING CLASS 250.
7. I.P. THREADS.
8. CONTRACTOR SHALL CONSTRUCT DRAIN HOLES IN BOTTOM OF METER PIT WITH DIGGING BAR OR AS REQUIRED BY WATER UTILITY. PLACE METER PIT BOTTOM ON REDWOOD 2" x 6" AND INSTALL 6-INCH SECTION OF DRAIN ROCK UNDER PIT FOR REDWOOD TO REST ON.
9. WATER METER AND RADIO READ HARDWARE AS APPROVED BY WATER UTILITY. CONTRACTOR TO VERIFY WITH WATER UTILITY AS TO WHO SUPPLIES THE METER.
10. CAST IRON LOCKING LID WITH TR/PL HOLE(S).
11. MUELLER VALVE OR APPROVED EQUAL (NO. 14265).
12. MUELLER ANGLE CHECK VALVE OR EQUAL.
- 13A. INLET LINE TO BE 3/4" MINIMUM.
- 13B. 1" MINIMUM. INLET LINE TO BE 1" MINIMUM.

PAGE 2 OF 2

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			3/4" SINGLE & DOUBLE SERVICE PIT, 1" SINGLE SERVICE PIT	DATE: DRAFT
				DWG: B04



SEE NOTES ON PAGE 2

PAGE 1 OF 2

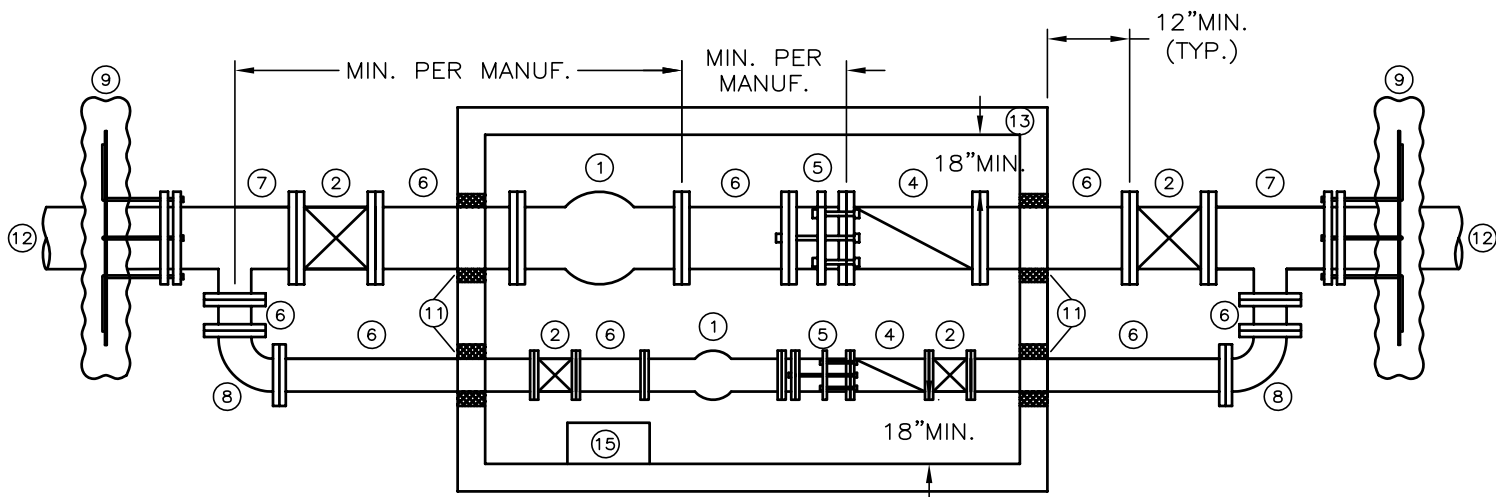
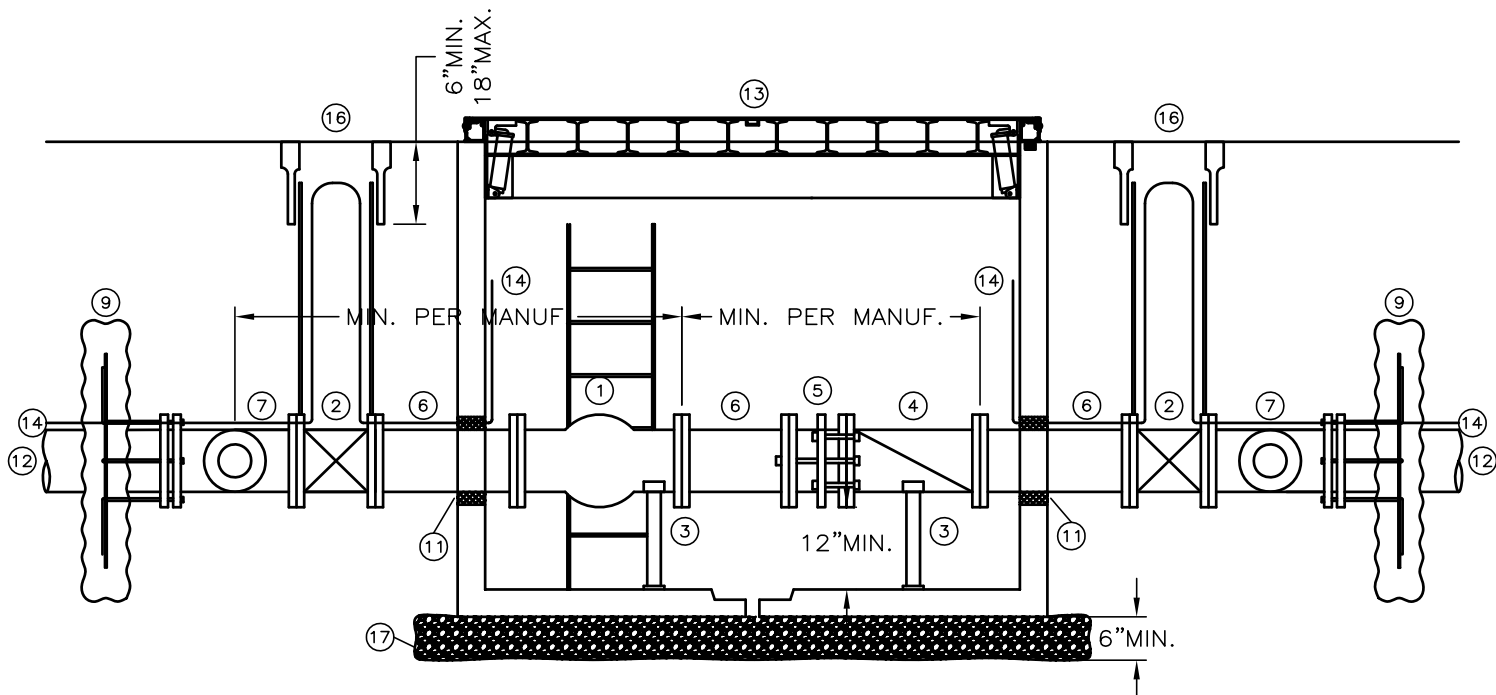
NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			<p>1 1/2" - 2"</p> <p>METER SET</p>	DATE: DRAFT
				DWG: B05

NOTES AND PARTS KEY:

1. USE A TRAFFIC RATED LID AND BOX WITH READING LID IN ALL TRAFFIC AREAS.
2. METER SHALL BE INSTALLED SO AS TO ACHIEVE A WATER TIGHT SEAL.
3. CUT TWO PIECES OF 1 INCH PIPE 18 INCHES LONG AND INSTALL THROUGH THE BRACE EYE SUPPORTS.
4. SINGLE METER GASKET.
5. FLANGED ANGLE BALL CHECK VALVE.
6. WATER METER AND RADIO READ HARDWARE AS APPROVED BY WATER UTILITY. CONTRACTOR TO VERIFY WITH WATER UTILITY AS TO WHO SUPPLIES METER.
7. BRACE EYE SUPPORTS.
8. BY-PASS BALL VALVE WITH LOCKABLE CAP.
9. POLYETHYLENE TUBING (SIZE AS REQUIRED BY WATER UTILITY). MINIMUM TEST 200 PSI OR CLASS RATING OF PIPE.
10. A CUSTOMER SHUT OFF VALVE ON THE DOWNSTREAM SIDE OF THE METER MAY BE REQUIRED BY WATER UTILITY; CONTRACTOR TO VERIFY WITH WATER UTILITY.
11. 4" THICK MUELLER INSULATION PAD OR 4' X 4' BLANKET INSULATION TO BE INSTALLED ABOVE METER AND BELOW TRANSMITTER.

PAGE 2 OF 2

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			1 1/2" - 2" METER SET	DATE: DRAFT
				DWG: B05



NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			3" TO 8" METER SET	DATE: DRAFT
				DWG: B06

PARTS KEY:

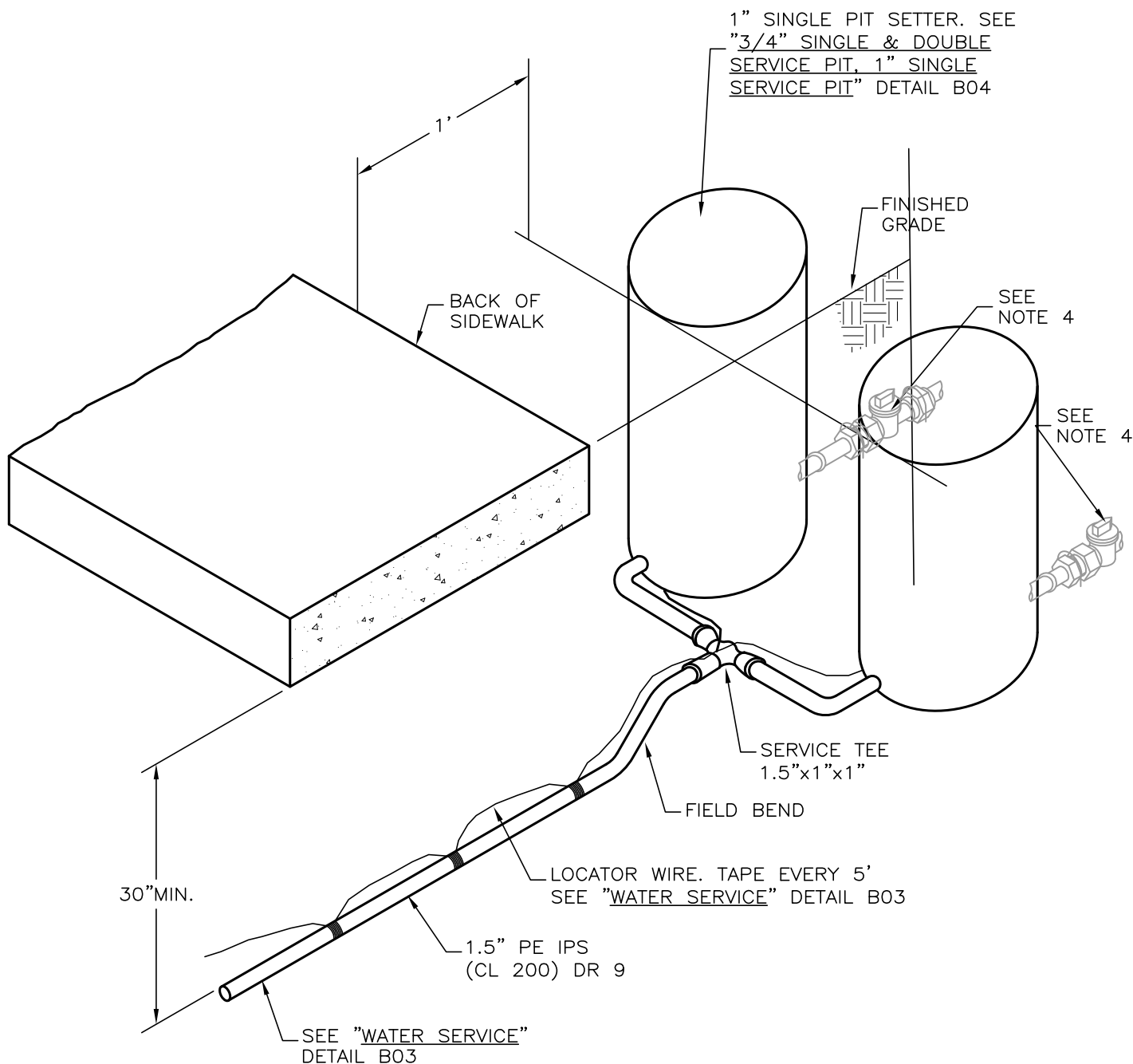
1. WATER METER [MAIN METER SIZED FOR PEAK AND MINIMUM DEMAND, BYPASS METER (IF REQUIRED BY UTILITY) SIZED FOR MINIMUM DEMAND], RADIO READ HARDWARE AS APPROVED BY WATER UTILITY, AND STRAINER (IF REQUIRED BY UTILITY). CONTRACTOR TO VERIFY WITH WATER UTILITY AS TO WHO SUPPLIES METER.
2. MUELLER GATE VALVE, NRS, AWWA C509. C/W OPERATING NUT OR APPROVED EQUAL.
3. GRINNELL OR BLA PIPE SUPPORTS.
4. MUELLER SWING CHECK VALVE OR APPROVED EQUAL.
5. ROMAC DJ400 DISMANTLING JOINT OR APPROVED EQUAL.
6. DUCTILE IRON PIPE, AWWA C115/C151. 250 PSI MINIMUM PRESSURE RATING.
7. TEE, AWWA C110/C153. 250 PSI MINIMUM PRESSURE RATING.
8. 90° BEND, AWWA C110/C153. 250 PSI MINIMUM PRESSURE RATING.
9. "HAMMERHEAD" THRUST BLOCK SIZED FOR APPLICATION ON UNDISTURBED SOIL. EXPOSED REINFORCEMENT TO BE STAINLESS STEEL OR IRON. MINIMUM 3-INCH CLEARANCE ON ALL CONCRETE REINFORCEMENT.
10. PRECAST CONCRETE VAULT, H2O LOAD RATED, WATERPROOF VAULT EXTERIOR WITH 2 COATS OF THOROSEAL/ACRYL 60 OR APPROVED EQUAL. VAULT TO BE SIZED SUCH THAT A MINIMUM OF 1'-6" HORIZONTAL CLEARANCE IS PROVIDED BETWEEN VAULT WALLS AND PIPING/APPURTENANCES AND BETWEEN PIPE/APPURTENANCES. A MINIMUM OF 1'-0" VERTICAL CLEARANCE IS TO BE PROVIDED BETWEEN PIPING/APPURTENANCES AND THE VAULT FLOOR. MINIMUM INTERIOR DIMENSIONS 6'-6"x4'-0"x5'-6", VAULT TO BE CAST WITH A SUMP. DRY INSTALLATIONS OUTSIDE OF ANY IMPACT FROM GROUNDWATER ARE TO HAVE A DRAIN HOLE CORED IN THE SUMP.
11. LINK-SEAL OR APPROVED EQUAL IN WET/GROUNDWATER INSTALLATIONS. KOR-N-SEAL BOOT IN DRY INSTALLATIONS
12. AWWA C900 PVC PIPE FOR 4-INCH THROUGH 8-INCH, AWWA C901 IPS HDPE PIPE FOR 3 INCH.
13. 48-INCH x 78-INCH ALUMINUM ACCESS COVER WITH STAINLESS STEEL HARDWARE, DRAIN CHANNEL, CONTINUOUS BUMPER SEAL, AND COMPRESSION SPRINGS (BILCO JDAL-H2O TRAFFIC RATED) OR APPROVED EQUAL FOR INCIDENTAL TRAFFIC AREAS. ACCESS COVERS CONSTRUCTED OUT OF STEEL OR THAT UTILIZE TORSION SPRINGS WILL NOT BE ALLOWED. 48-INCH X 78-INCH DIAMOND PLATE TOP SLAB WITH 36-INCH RING AND COVER FOR FULL H2O TRAFFIC LOAD.
14. 12 GAUGE COPPER-CLAD STEEL WIRE WITH HDPE COATING LOCATION WIRE, EXTEND 48 INCHES INTO METER BOX.
15. STEEL LADDER WITH LADDER-UP SAFETY POST, BILCO LU-1 OR APPROVED EQUAL.
16. TRAFFIC RATED VALVE BOX.
17. 3/4-INCH WASHED DRAIN ROCK. 6-INCH MINIMUM.

NOTES:

1. BYPASS LINES REQUIRED BASED ON INSTALLATION. CONSULT WITH UTILITY TO DETERMINE IF A BYPASS LINE IS REQUIRED.
2. METER VAULT IS TO BE CONSTRUCTED SUCH THAT NO EXTERIOR WATER (INFILTRATION OR INFLOW) IS ALLOWED TO ENTER THE VAULT.
3. METER MANUFACTURER'S RECOMMENDED UPSTREAM AND DOWNSTREAM CLEAR OPEN PIPE REQUIREMENTS ARE TO INCORPORATED INTO THE VAULT DESIGN.
4. ALL PIPE, VALVES, METERS, AND ANY OTHER ITEM THAT WILL BE IN DIRECT CONTACT WITH POTABLE WATER MUST BE NSF 61 APPROVED.

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NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			3" TO 8" METER SET	DATE: DRAFT
				DWG: B06

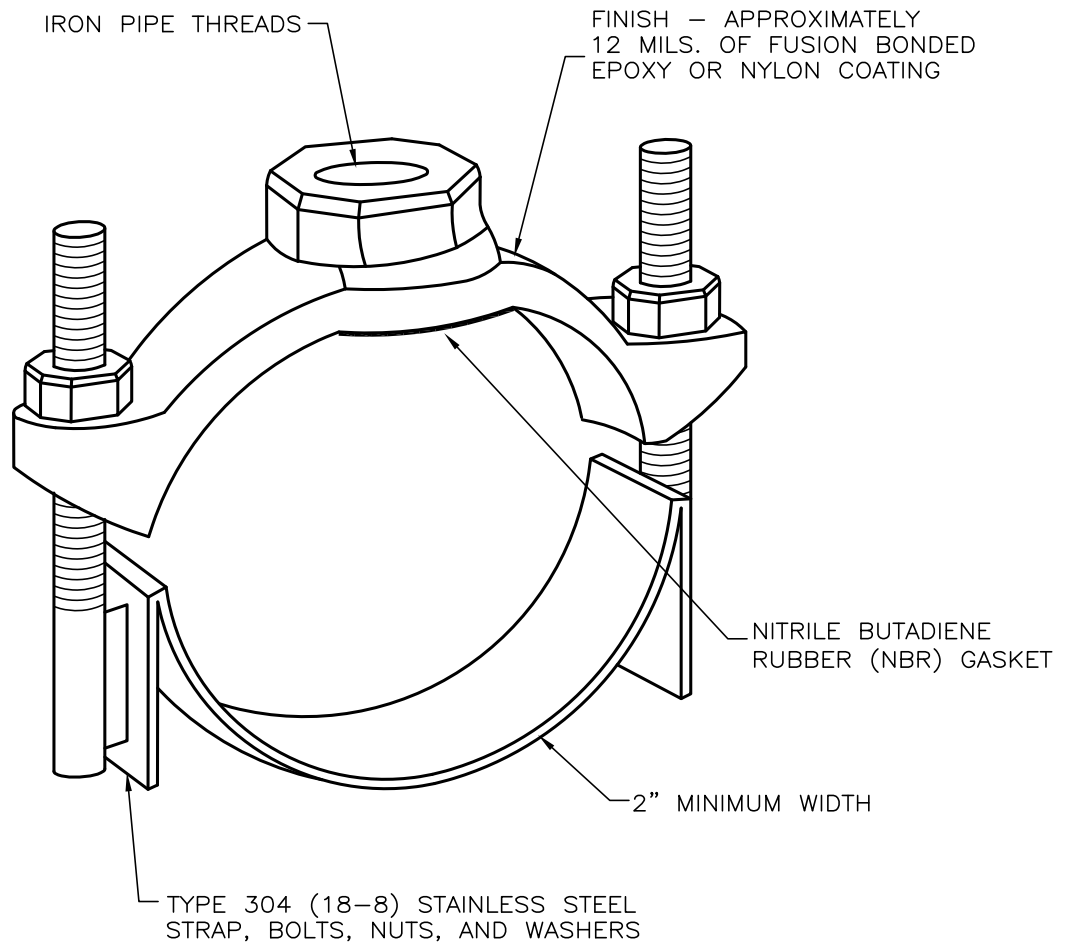


NOTES:

1. ALL SERVICE LINE COUPLING FITTINGS SHALL BE MUELLER IPS 110 COUP. X MIP OR APPROVED EQUAL.
2. THE METER SHALL BE LOCATED AT A POINT AS CLOSE AS PRACTICABLE TO THE PROPERTY LINE, ALLEYS, OR EASEMENTS.
3. NO DUAL 1-INCH SERVICE IN GARDNERVILLE WATER COMPANY SERVICE AREA.
4. A CUSTOMER SHUT OFF VALVE ON THE DOWNSTREAM SIDE OF THE METER MAY BE REQUIRED BY WATER UTILITY; CONTRACTOR TO VERIFY WITH WATER UTILITY.

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NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			1" DUAL METER SET	DATE: DRAFT
				DWG: B07

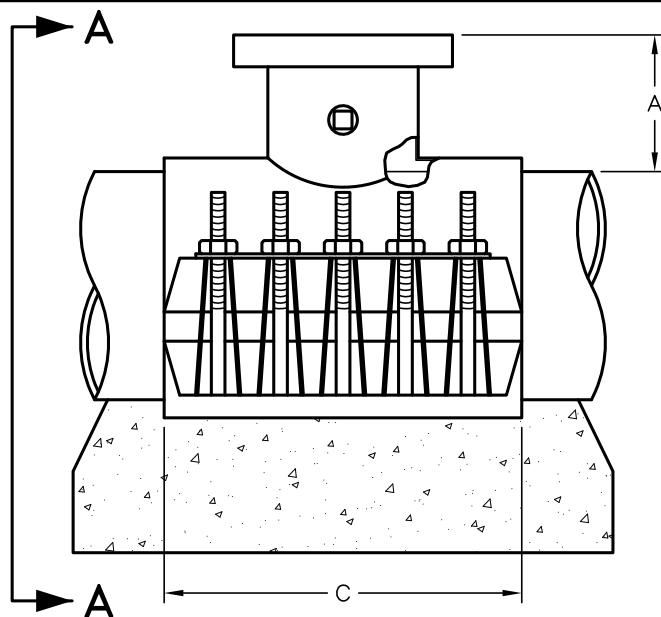


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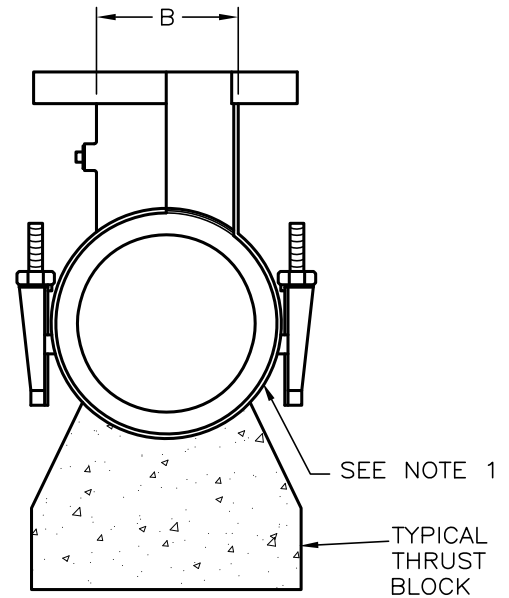
1. SEE ALSO "WATER SERVICE" DETAIL B03.
2. SINGLE OR DOUBLE STRAP MAY BE UTILIZED FOR 3/4-INCH AND 1-INCH SERVICES, AS DIRECTED BY WATER UTILITY.
3. DOUBLE STRAPS SHALL BE UTILIZED FOR 1 1/2-INCH AND 2-INCH SERVICES.
4. SERVICE SADDLES SHALL MEET AWWA C800.

PAGE 1 OF 1

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			SERVICE SADDLE (3/4" - 2")	DATE: DRAFT
				DWG: B08



TYPICAL THRUST BLOCKING



SECTION A-A

MATERIAL SPECIFICATIONS:

SHELL: 304 STAINLESS STEEL

LUGS: 304 STAINLESS STEEL

BOLTS, WASHERS AND NUTS: TYPE 304 STAINLESS STEEL, 5/8" DIAMETER.

GASKETS: NITRILE BUTADIENE RUBBER (NBR) FOR WATER SERVICE. ASTM D2000-MBC 610 FULL GASKET. 360° PIPE COVERAGE.

FLANGE: 304 STAINLESS STEEL OR HIGH TENSILE DUCTILE (NODULAR) IRON, ASTM A536-80, GRADE 65-45-12.

PRESSURE RATING:

- 200 PSI FOR 4-INCH THROUGH 8-INCH.
- 175 PSI OR HIGHER FOR 8-INCH THROUGH 24-INCH, OR AS APPROVED BY WATER UTILITY.

NOTES:

1. MATERIAL USED FOR THRUST BLOCKING SHALL NOT PREVENT ACCESS TO THE BOLT ASSEMBLY.
2. MINIMUM DISTANCE BETWEEN TAPS, COLLARS, JOINTS, SERVICE TAPS, ETC, SHALL BE 18 INCHES.
3. SADDLE TO BE HYDROSTATICALLY TESTED PER MANUFACTURER'S RECOMMENDATIONS AND AWWA C223-02.
4. ANY HOT TAPS GREATER THAN 2-INCHES WILL BE BY AN APPROVED CONTRACTOR UNLESS WAIVED BY THE WATER UTILITY.
5. FOR FULL BODY TAPPING SLEEVES: MECHANICAL JOINT TAPPING SLEEVE SHALL BE DUCTILE IRON AND HAVE DI MECHANICAL JOINT END SEALS CONFORMING TO AWWA C111, WITH OUTLET FLANGE CONFORMING TO AWWA C207, CLASS D, WITH ANSI 150-LB DRILLING RECESSED FOR TAPPING SLEEVE. TAPPING SLEEVE SHALL FIT AWWA STANDARD 1908, CLASS AB-CD CAST IRON PIPE. MANUFACTURED BY CLOW, MUELLER, OR APPROVED EQUAL BY WATER UTILITY. ACCEPTABLE FOR CAST IRON AND DUCTILE IRON PIPE.
6. ON AC PIPE 2-INCH TAPPING SLEEVE REQUIRED DETAIL PER DESIGN ENGINEER, 2-INCH SERVICE SADDLE REQUIRED FOR ALL OTHER SERVICE LATERALS.

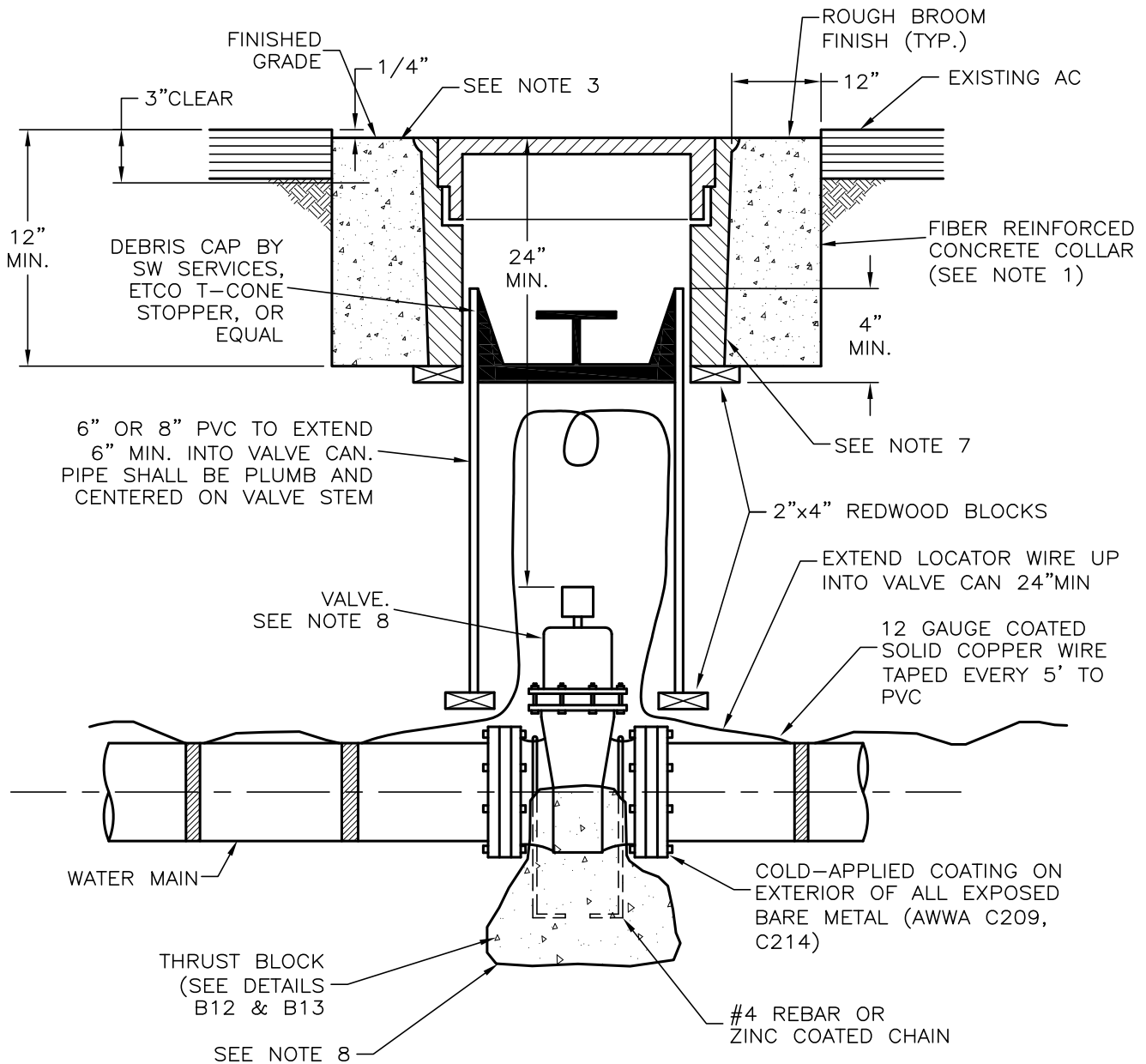
NOM. FLANGE	A	B	C	NO. BOLTS
4	4	5-1/32	16	10
6*	4-1/2	7-1/32	16	10
8*	4	9-1/32	20	14
10	5-1/2	11-1/32	24	16
12**	6-1/2	13-1/32	30	30

* TAPPING SLEEVES IN THE 24" NOMINAL PIPE SIZE RANGE WITH 6" OR 8" FLANGES ARE 24" LONG (C DIMENSION) AND HAVE 24" BOLTS.

** TAPPING SLEEVES IN THE 12" AND 14" NOMINAL PIPE SIZE RANGE WITH 12" FLANGE ARE 24" LONG AND HAVE 24" BOLTS.

PAGE 1 OF 1

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			TAPPING SLEEVE	DATE: DRAFT
				DWG: B09



SEE NOTES ON PAGE 2

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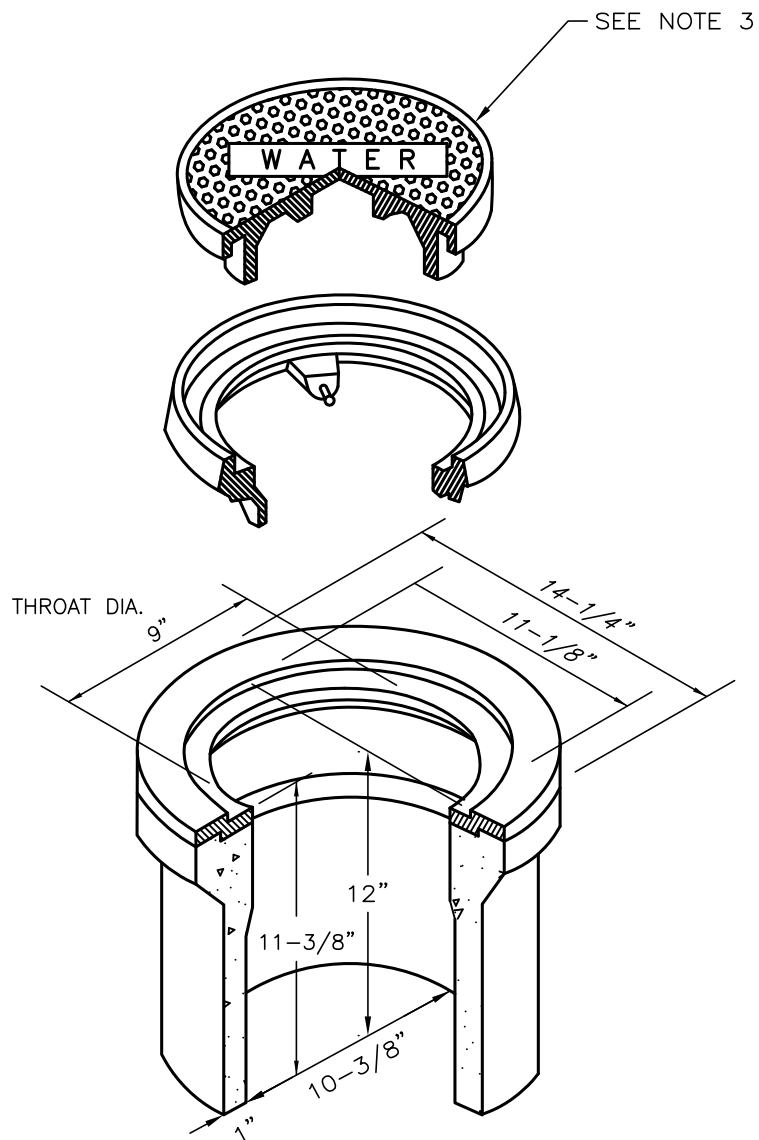
NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			VALVE	DATE: DRAFT
				DWG: B10

NOTES:

1. CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 202.12 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
2. IN ALL AREAS, LIDS SHALL BE SET FLUSH WITH FINISHED GRADE UNLESS OTHERWISE NOTED.
3. THE CONCRETE COLLAR SHALL BE 1/4" BELOW SURROUNDING PAVEMENT. FOR TOWN OF MINDEN AND LAKE UTILITY'S PROVIDE CONCRETE COLLAR WITH BLACK TOP AS APPROVED BY WATER UTILITY.
4. SPLICES IN WIRE SHALL BE CONNECTED BY WIRE NUTS AND WRAPPED WITH U/L LISTED ELECTRICAL TAPE, OR AS SPECIFIED BY WATER UTILITY.
5. THE CONTRACTOR SHALL PROVIDE AND INSTALL EXTENSION STEMS SO THAT VALVE OPERATING NUT IS NOT GREATER THAN 5 FEET BELOW FINISHED GRADE.
6. 10" VALVE BOX AND COVER MARKED "WATER" CHRISTY G-5 (AS APPROVED BY WATER UTILITY) WITH CAST IRON LID OR EQUAL. SEE "VALVE BOX" DETAIL B11.
7. VALVE:
 - FULL FLOW WATERWAY
 - O-RING SEAL
 - WEDGE DESIGN
 - FULL EPOXY COATING INSIDE AND OUT
 - OPERATOR NUT
 - 200 PSI RATING
 - STAINLESS STEEL BOLTS WITH BRONZE OR STAINLESS STEEL NUTS
 - LOW ZINC OR SS STEM
 - AWWA C509
8. THRUST BLOCK OR CONCRETE PILLOW WITH #4 REBAR OR ZINC COATED CHAIN MAY BE REQUIRED AT THE DISCRETION OF THE WATER UTILITY. MATERIAL USED FOR THRUST BLOCKING SHALL NOT PREVENT ACCESS TO THE BOLT ASSEMBLY.
9. THRUST BLOCK MAY BE ELIMINATED FOR FLANGED VALVES WITH MUELLER AQUAGRIP OR APPROVED EQUAL FLANGED RESTRAINT ADAPTOR, UNLESS CONSTRUCTING IN THE GARDNERVILLE WATER COMPANY SERVICE AREA.
10. RESTRAINTS PER ENGINEER'S DESIGN, BUT MANUFACTURER PARTS AS APPROVED BY WATER UTILITY.
11. ALL APPURTENANCES SHALL BE AS SPECIFIED, UNLESS APPROVED AS EQUAL BY WATER UTILITY.
12. VALVES LARGER THAN 12-INCH SHALL BE BUTTERFLY VALVES, OR AS APPROVED BY WATER UTILITY.

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NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			VALVE	DATE: DRAFT
				DWG: B10

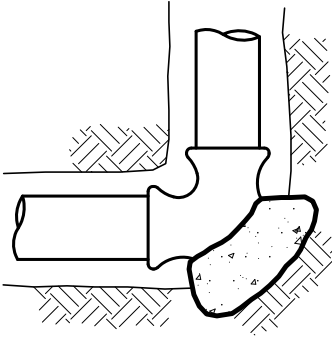
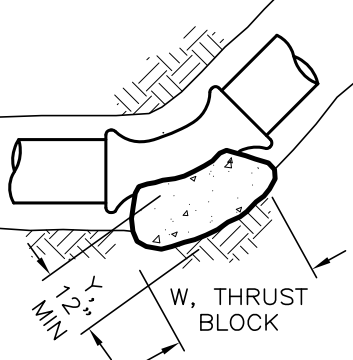
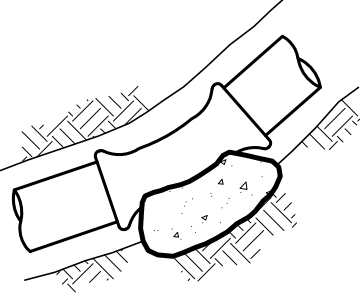
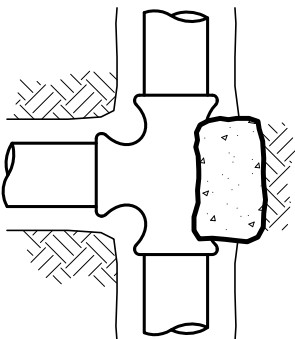
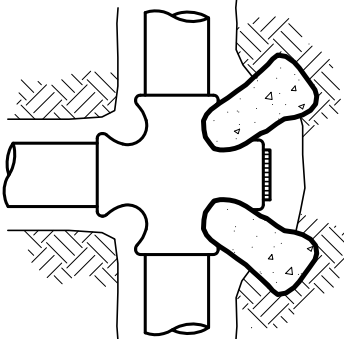
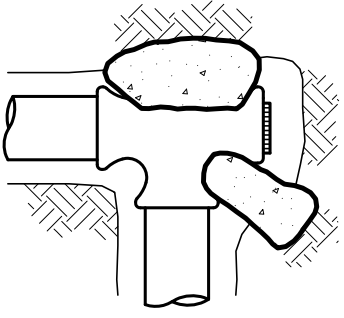


NOTES:

1. VALVE BOX MUST BE TRAFFIC RATED (CHRISTY G-5, AS APPROVED BY WATER UTILITY) WITH CAST IRON LID OR EQUAL.
2. MINIMUM OF 10 INCHES INSIDE DIAMETER.
3. CAST IRON LID MARKED "WATER" FOR WATER LINE APPLICATIONS. CAST IRON LID MARKED "RECLAIMED WATER" OR "RCW" WHEN INSTALLED ON A RECLAIMED WATER MAIN. CAST IRON LID SHALL BE MARKED "SS FORCE MAIN" OR "SS FM" WHEN INSTALLED ON A SANITARY SEWER FORCE MAIN.
4. RISER OF 6 INCHES OR 8 INCHES PVC EXTENDED IN VALVE CAN A MINIMUM OF 6 INCHES.
5. ALL NEW VALVE BOXES TO BE SET TO GRADE PER "VALVE" DETAIL B10.
6. TORQUE GRADE RING BOLTS TO MANUFACTURER'S RECOMMENDATIONS.

PAGE 1 OF 1

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			VALVE BOX	DATE: DRAFT
				DWG: B11

Type of Fitting	90° Bend	45° Bend	11.25° or 22.5° Bend
Typical Installation			
Type of Fitting	Tee or Dead End	Cross w/Plug	Tee w/Plug
Typical Installation			

Minimum Thrust Block Bearing Area – Square Feet (Y x W)

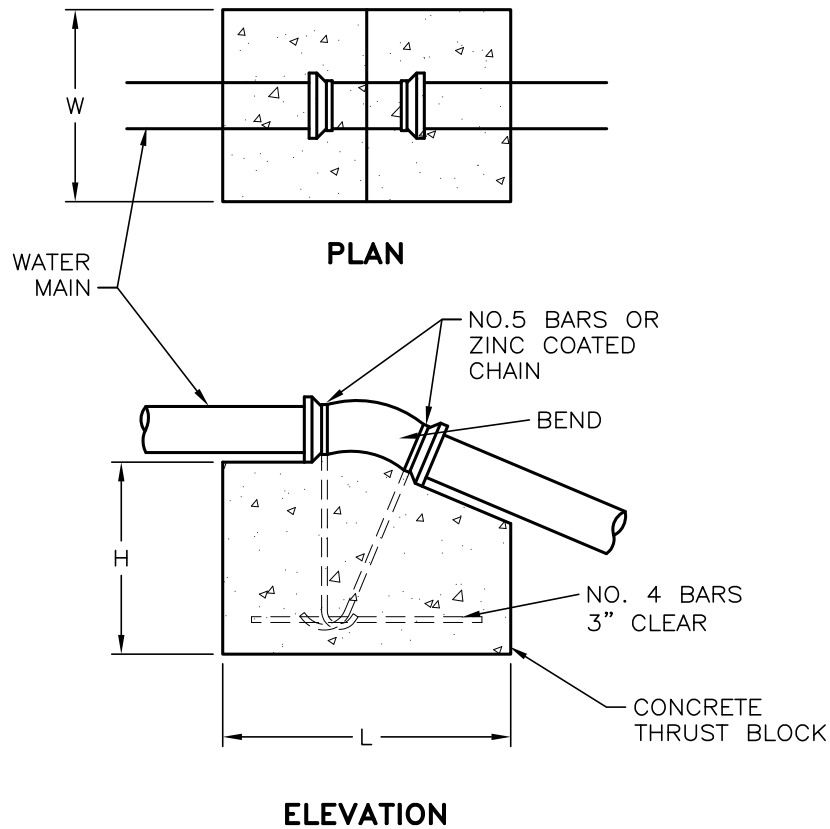
Type of Fitting	90° Bend, Cross w/Plug or Tee w/Plug	45° Bend	11.25° or 22.5° Bend	Tee or Dead End
Size of Pipe	4"	2	1	2
	6"	5	3	4
	8"	8	5	6
	10"	13	7	9
	12"	18	10	13
	14"	25	13	17
	16"	32	17	23

NOTES:

1. CONCRETE FOR THRUST BLOCKS SHALL CONFORM TO SECTION 337.10 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
2. THRUST BLOCKS SHALL BE PLACED AGAINST UNDISTURBED SOIL.
3. JOINTS AND FACE OF PLUGS SHALL BE KEPT CLEAR OF CONCRETE.
4. THRUST BLOCK BEARING AREAS ARE FOR A 160 PSI TEST PRESSURE WITH 2000 PSF BEARING CAPACITY, NOMINAL PIPE DIAMETER, AND A FACTOR OF SAFETY OF 1.5 INSTALLATIONS USING DIFFERENT TEST PRESSURES, AND/OR SOIL TYPES SHALL BE ADJUSTED BY THE DESIGN ENGINEER.

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NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			THRUST BLOCKS	DATE: DRAFT
				DWG: B12



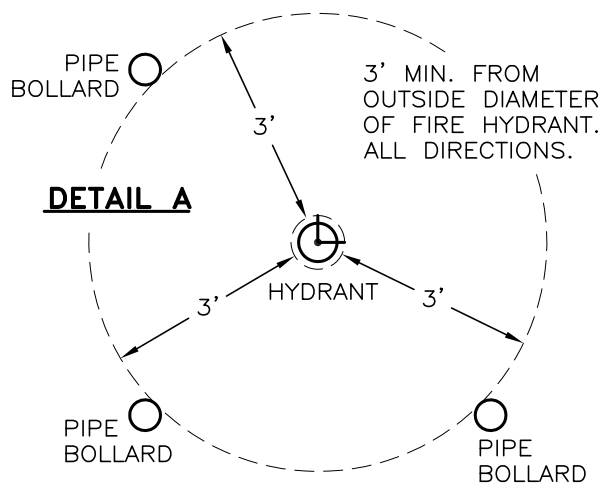
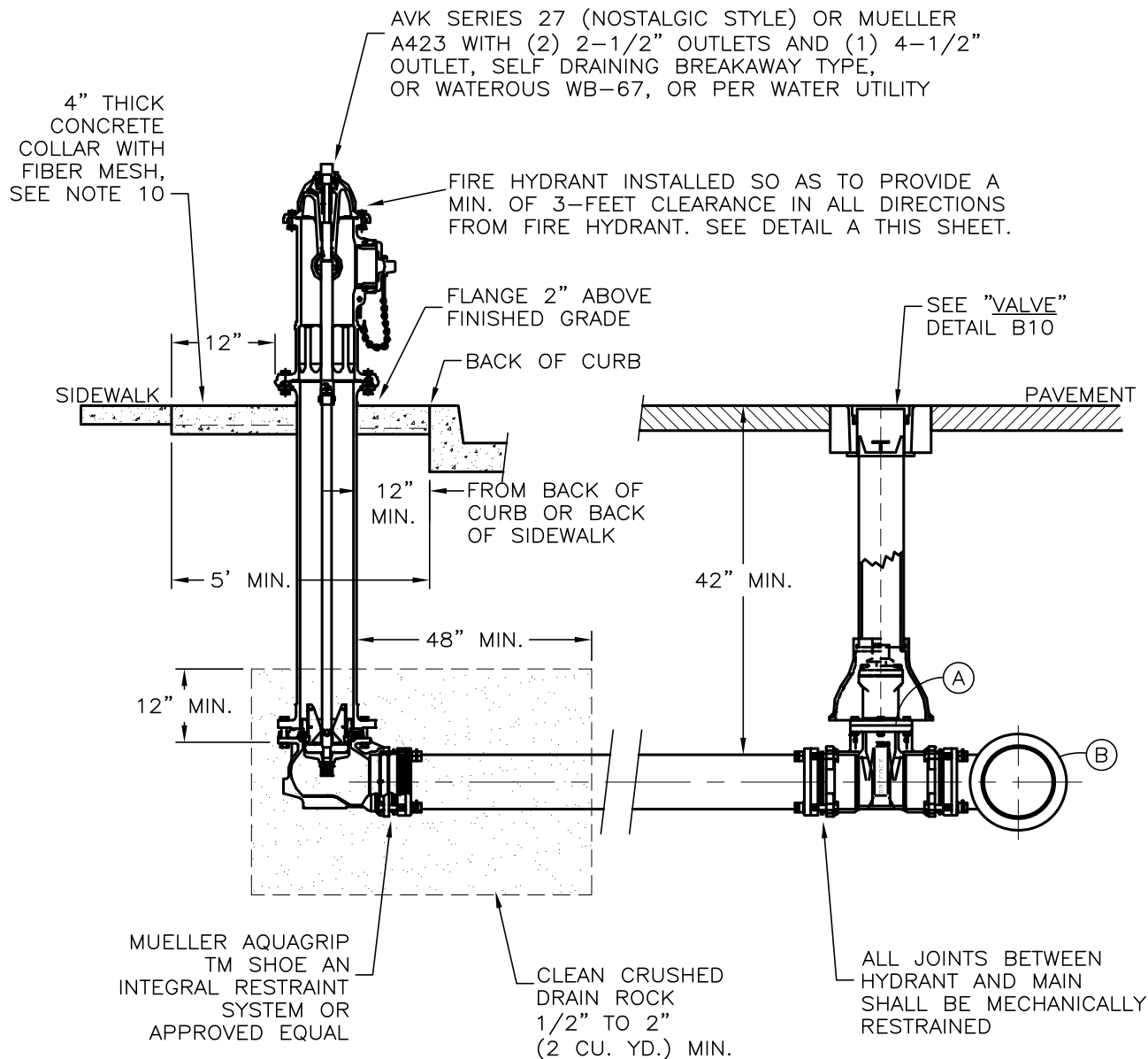
DIMENSIONS									
PIPE SIZE	11.25° BEND			22.5° BEND			45° BEND		
	L	W	H	L	W	H	L	W	H
6"	2'-0"	2'-0"	1'-6"	3'-0"	2'-0"	2'-0"	4'-0"	2'-0"	3'-6"
8"	3'-0"	3'-0"	2'-0"	4'-0"	2'-0"	3'-0"	6'-0"	2'-0"	4'-6"
10"	3'-0"	3'-0"	2'-0"	4'-0"	3'-0"	3'-0"	6'-0"	3'-0"	4'-6"
12"	4'-0"	4'-0"	2'-6"	6'-0"	3'-0"	3'-0"	7'-0"	4'-0"	4'-6"

NOTES:

1. CONCRETE FOR THRUST BLOCKS SHALL CONFORM TO SECTION 337.10 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
2. REINFORCING STEEL SHALL BE EPOXY COATED.
3. VOLUMES GIVEN ARE FOR PIPE AT TEST PRESSURE 160 PSI AND NORMAL WEIGHT CONCRETE (145 LB / CUBIC FOOT). INSTALLATIONS USING DIFFERENT TEST PRESSURES OR WEIGHT OF CONCRETE SHOULD ADJUST VOLUMES ACCORDINGLY.
4. JOINTS SHALL BE KEPT CLEAR OF CONCRETE.

PAGE 1 OF 1

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			THRUST BLOCK FOR UPWARD THRUST	DATE: DRAFT
				DWG: B13



- A. 6 INCH MUELLER GATE VALVE WITH 2 INCH SQUARE OPERATING NUT. SEE DETAIL B10.
- B. FLANGE TEE DI ON NEW CONSTRUCTION. SEE "TAPPING SLEEVE" DETAIL B09 FOR EXISTING MAINS.

SEE NOTES ON PAGE 2

PAGE 1 OF 2

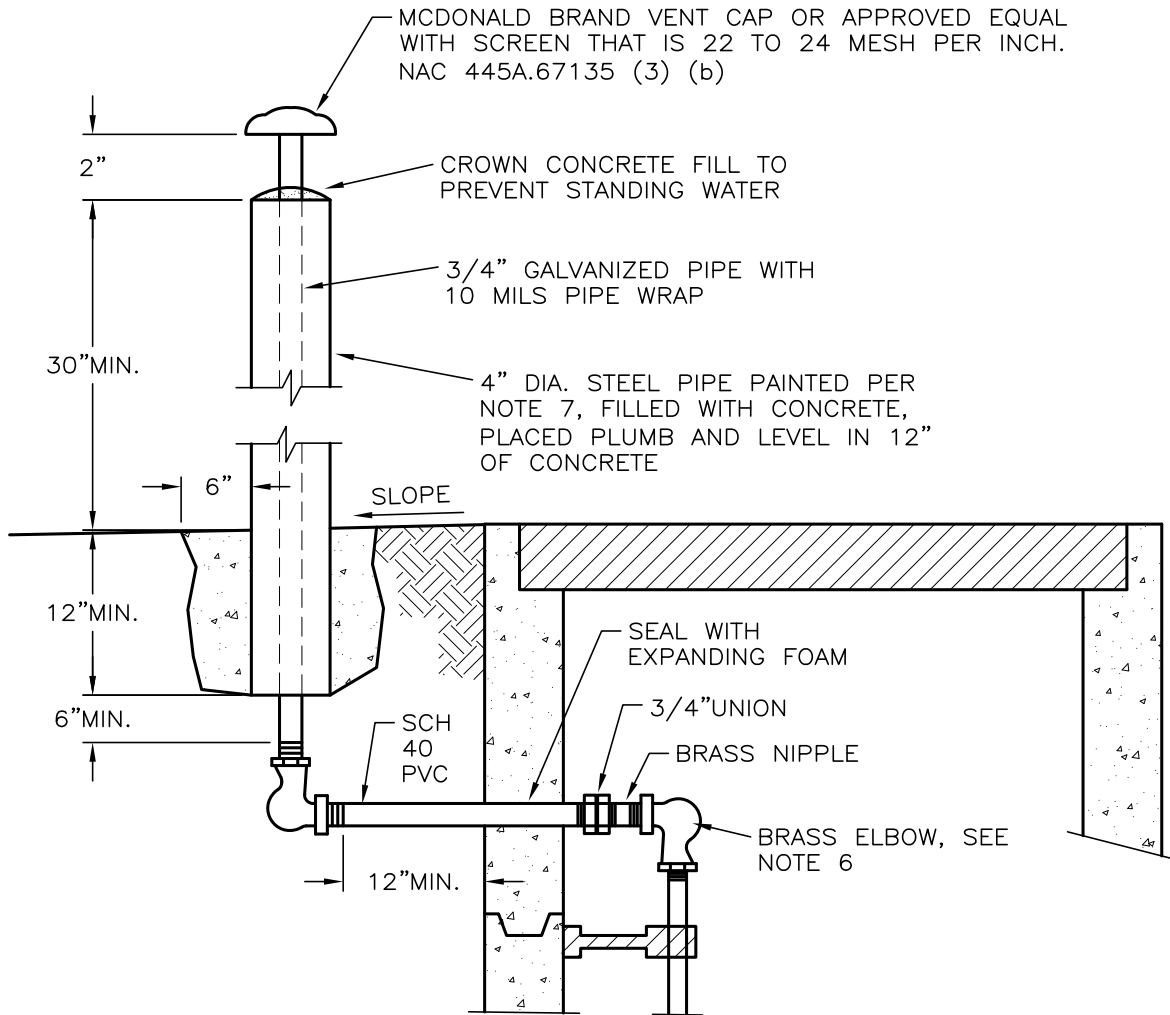
NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			FIRE HYDRANT ASSEMBLY	DATE: DRAFT
				DWG: B14

NOTES:

1. HYDRANT COLOR SHALL BE AS APPROVED BY THE APPLICABLE FIRE DISTRICT.
2. OPERATING NUT SHALL BE 1-1/2" PENTAGON.
3. INSPECTION BY WATER UTILITY SHALL BE REQUIRED PRIOR TO BACKFILLING.
4. IN RESIDENTIAL AREAS, IF SIDEWALK NOT PRESENT, SET HYDRANT SO THAT OPERATING NUT IS 3'-6" BEHIND BACK OF CURB.
5. NO FENCES, LANDSCAPING OR ANY ABOVE GROUND IMPROVEMENTS SHALL BE ALLOWED WITHIN 3' OF THE OUTER MOST DIAMETER OF THE FIRE HYDRANT.
6. PROVIDE 42" MINIMUM COVER AT ROADSIDE DITCH FLOWLINE. LOCALIZED DIPPING OF WATER MAIN AT DITCH MAY NOT BE USED TO ACHIEVE 42" COVER.
7. GATE VALVE SHALL BE LOCATED WITHIN THE PAVEMENT, WHERE POSSIBLE.
8. FOR COMMERCIAL AND INDUSTRIAL PROPERTIES, OR WHEN THERE IS NO CURB, BOLLARDS SHALL BE ADDED PER "BOLLARD" DETAIL A20 WITH 3' CLEARANCE. SEE DETAIL A (SHEET 1/2).
9. THRUST BLOCK AND CONCRETE PILLOW WITH #4 REBAR OR ZINC COATED CHAIN MAY BE REQUIRED AT THE DISCRETION OF THE WATER UTILITY. MATERIAL USED FOR THRUST BLOCKING SHALL NOT PREVENT ACCESS TO THE BOLT ASSEMBLY.
10. 4" THICK CONCRETE COLLAR SHALL EXTEND OUT 12" FROM THE OUTER DIAMETER OF FIRE HYDRANT. THIS MAY CREATE A CONTINUOUS SECTION OF CONCRETE IN LANDSCAPE FINGERS AND SIMILAR AREAS.

PAGE 2 OF 2

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			FIRE HYDRANT ASSEMBLY	DATE: DRAFT
				DWG: B14



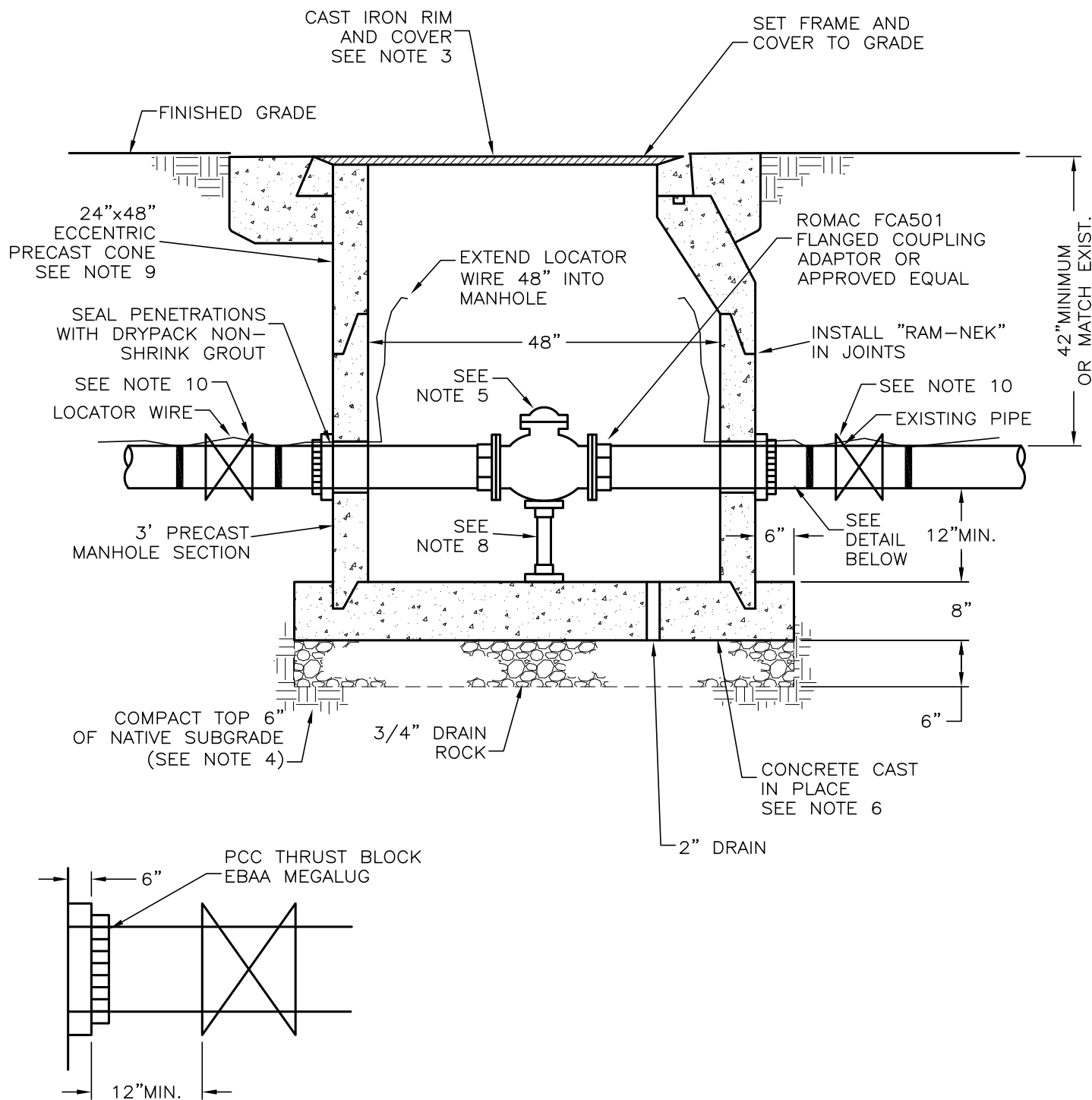
**LAKE SCENARIO
OR AS APPROVED
BY WATER UTILITY**

NOTES:

- AIR RELEASE VALVES SHALL BE INSTALLED OUTSIDE PAVEMENT SECTION WHENEVER POSSIBLE. SLOPE GROUND AWAY FROM VALVE BOX OR CONSTRUCT CURBING TO PROTECT FROM FLOODING BY SURFACE DRAINAGE.
- WHEN CONSTRUCTED IN STREET SECTION, CONSTRUCT AIR RELEASE BOX TO SIDE OF ROADWAY AND CONSTRUCT "GOOSE-NECK" ABOVE SURROUNDING GRADE AS DIRECTED BY CONSTRUCTION INSPECTOR.
- CENTER OR SHIFT ASSEMBLY AS NECESSARY TO ALLOW FOR REMOVAL AND REPAIR. COORDINATE WITH WATER UTILITY.
- ALL PIPES SHALL BE SLOPED UP TO AIR RELEASE VALVE.
- INSULATE EXTERIOR OF BOX WITH 2" FOAM INSULATION, COVER WITH VISQUEEN BARRIER, BELOW GRADE.
- IF THERMAL FREEZE VALVE INSTALLED PER WATER UTILITY, THEN INSTALL TEE INSTEAD OF 90° ELBOW.
- STEEL PIPE PAINT SHALL BE RUST-OLEUM 7400 HIGH GLOSS SAFETY YELLOW ALKYD ENAMEL OR APPROVED EQUAL.

PAGE 2 OF 2

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			COMBINATION AIR VALVE ASSEMBLY	DATE: DRAFT
				DWG: B15



SEE NOTES ON PAGE 2

PAGE 1 OF 2

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			CHECK VALVE	DATE: DRAFT
				DWG: B16

NOTES:

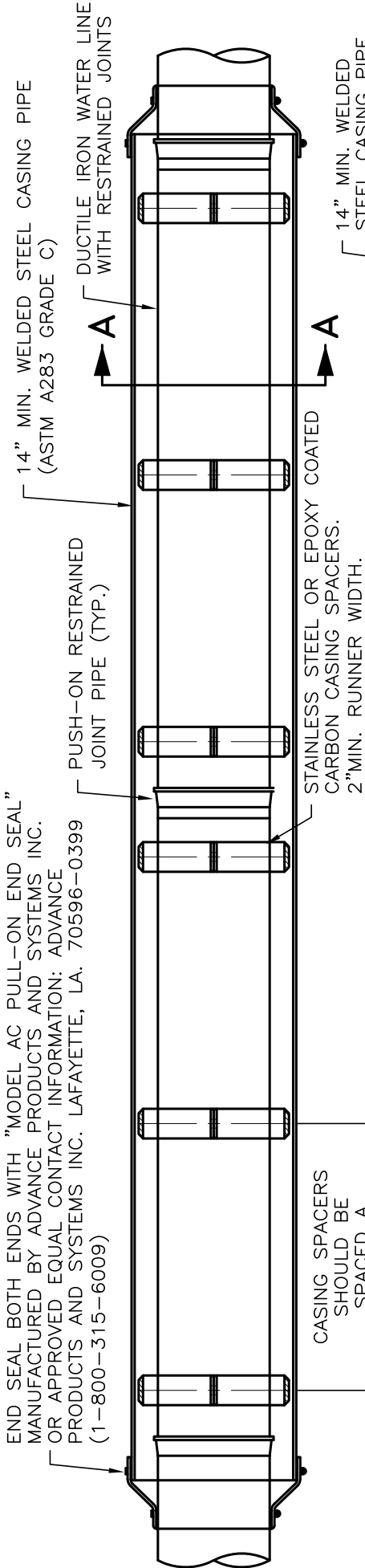
1. CENTER CHECK VALVE IN VAULT.
2. MATCH ADJACENT PAVEMENT THICKNESS, NOT TO EXCEED 4".
3. MANHOLE FRAME AND COVER TO BE SOUTH BAY FOUNDRY SBF 1900 CLOSED PICK HOLE OR EQUAL AND COVER TO BE MARKED "WATER".
4. COMPACT NATIVE SUBGRADE IN CONFORMANCE WITH SECTION 302 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, PRIOR TO PLACING DRAINROCK.
5. CHECK VALVES 12 INCHES OR LARGER REQUIRE SPECIAL DESIGN AND APPROVAL OF THE WATER UTILITY.
6. CONCRETE SHALL CONFORM TO SECTION 202 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
7. MUELLER FLG x FLG SWING CHECK VALVE OR APPROVED EQUAL.
8. 3 INCH GALVANIZED STEEL PIPE WITH THREADED FLANGES.
9. 24 INCH x 48 INCH ECCENTRIC PRECAST CONE (FOR CHECK VALVES 2 INCHES AND LESS). FOR VALVES GREATER THAN 2" DESIGN ENGINEER TO SPECIFY.
10. GATE VALVE, RISER PIPE, AND G-5 OR G-4 CHRISTY BOX AS APPROVED BY WATER UTILITY.
11. STEPS ARE REQUIRED WHERE MANHOLE DEPTH IS 54 INCHES (4'-6") OR GREATER, STEPS SHALL BE ALIGNED VERTICALLY (1 INCH MAXIMUM TOLERANCE) AND HORIZONTALLY (0.5 INCH TOLERANCE) SO AS TO FORM A CONTINUOUS LADDER, AND SHALL CONFORM WITH THE DESIGN REQUIREMENTS OF THE STATE OF NEVADA, OSHA STANDARDS, SECTION 1910.27 (DEPTH IS RIM ELEVATION TO TOP OF PIPE). STEPS SHALL BE STEEL REINFORCED POLYPROPYLENE.
12. CHECK VALVES 3 INCHES AND GREATER SHALL BE INSTALLED IN A VAULT WITH H2O TRAFFIC RATED LID AND LADDER.

PAGE 2 OF 2

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION:
			CHECK VALVE	DOUGLAS COUNTY
				DATE: DRAFT
				DWG: B16

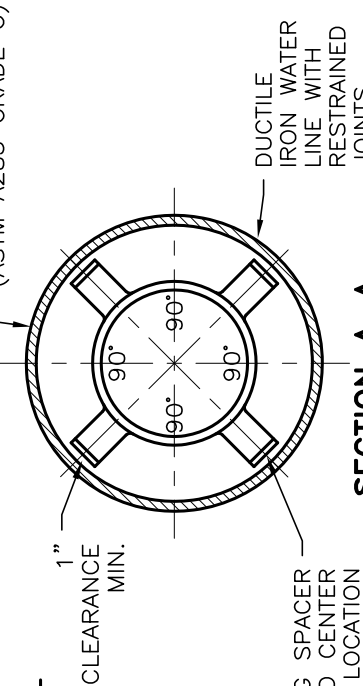
CARRIER PIPE AND CASING PIPE SIZES (MIN.) IN INCHES										
CARRIER PIPE NOM. DIA. (D1)	4	6	8	10	12	14	16	18	20	24
CASING PIPE NOM. DIA. (D2)	14	16	20	20	24	30	30	30	36	42

END SEAL BOTH ENDS WITH "MODEL AC PULL-ON END SEAL" MANUFACTURED BY ADVANCE PRODUCTS AND SYSTEMS INC. OR APPROVED EQUAL CONTACT INFORMATION: ADVANCE PRODUCTS AND SYSTEMS INC. LAFAYETTE, LA. 70596-0399 (1-800-315-6009)



WATER LINE PIPE CASING DETAIL

(SECTION ALONG CENTERLINE OF PIPE)



NOTES:

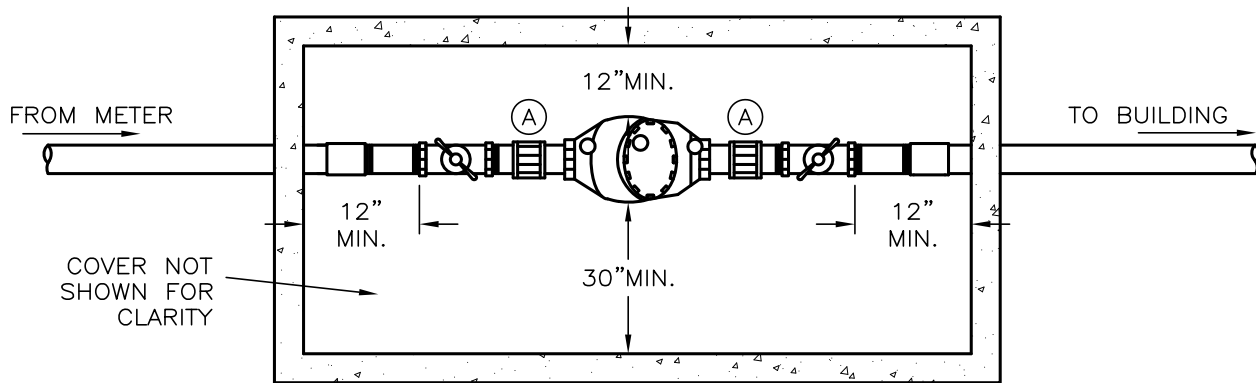
- DESIGN ENGINEER SHALL DETERMINE THE REQUIRED THICKNESS OF THE STEEL CASING (0.25" MIN. FOR CASING LESS THAN 20" IN DIAMETER OR 0.50" MIN. FOR CASINGS 20" IN DIAMETER OR GREATER) IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS OF THE JACKING PIT BRACING, THE CASING, THE JACKING HEAD, THE CARRIER PIPE INSTALLATION METHOD, AND THE BRACING TO SUPPORT THE CARRIER PIPE. WOODEN SKIDS WILL NOT BE ALLOWED.
- THE ANNULAR SPACE BETWEEN THE CARRIER PIPE AND THE CASING PIPE SHALL NOT BE GROUTED.

SECTION A-A

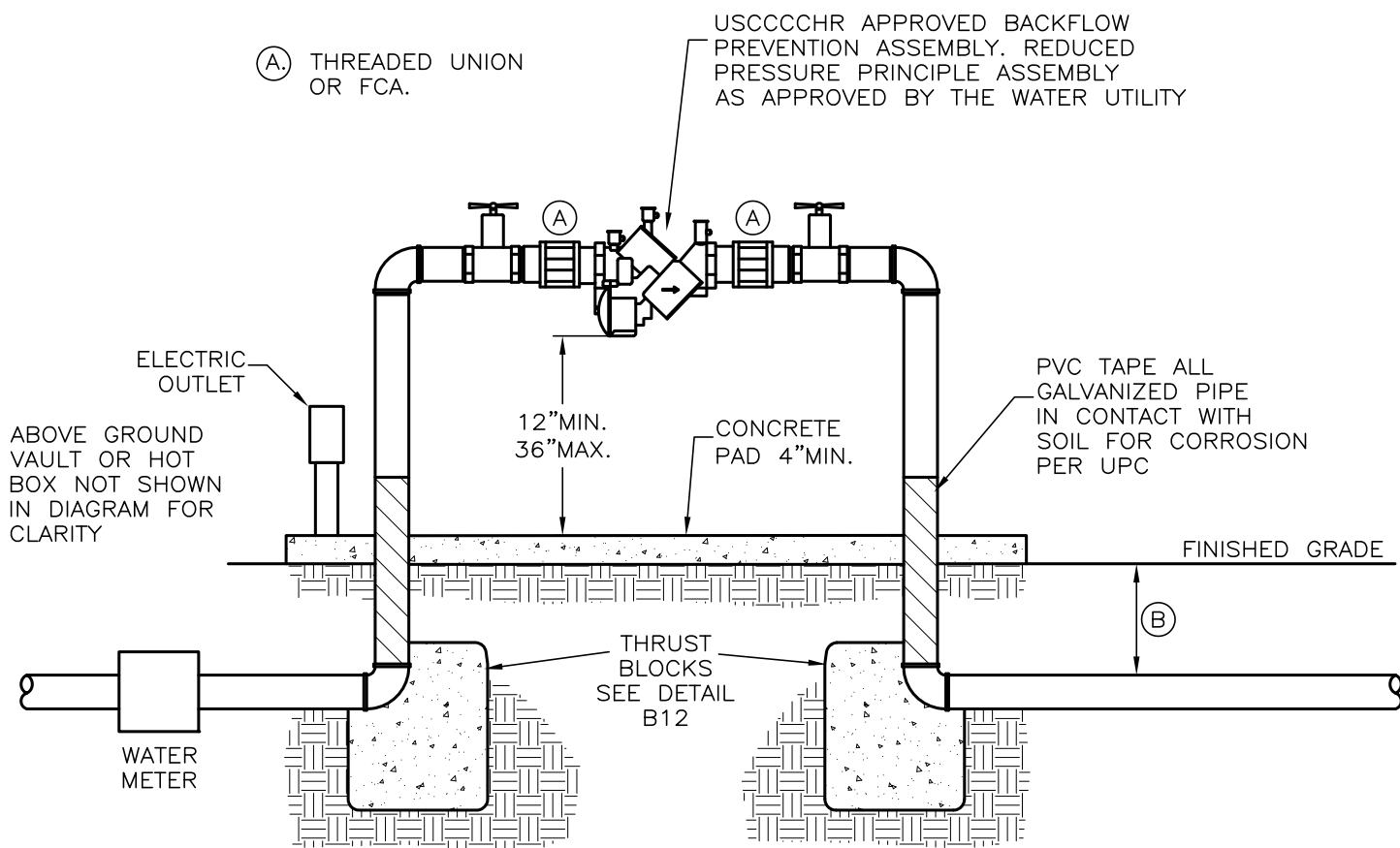
2 CASING FOR CULVERT BORE

NOT TO SCALE

NO.		REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION:
				STEEL CASING	DOUGLAS COUNTY
					DATE: DRAFT
					DWG: B17



PLAN VIEW



ELEVATION VIEW

(B) 30 INCHES MIN. PIPE DEPTH. USE TWO FULL TURNS OF TEFLON TAPE ON ALL THREADED JOINTS.

SEE NOTES ON PAGE 2

PAGE 1 OF 2

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			BACKFLOW PREVENTION ASSEMBLY (RP)	DATE: DRAFT
				DWG: B18

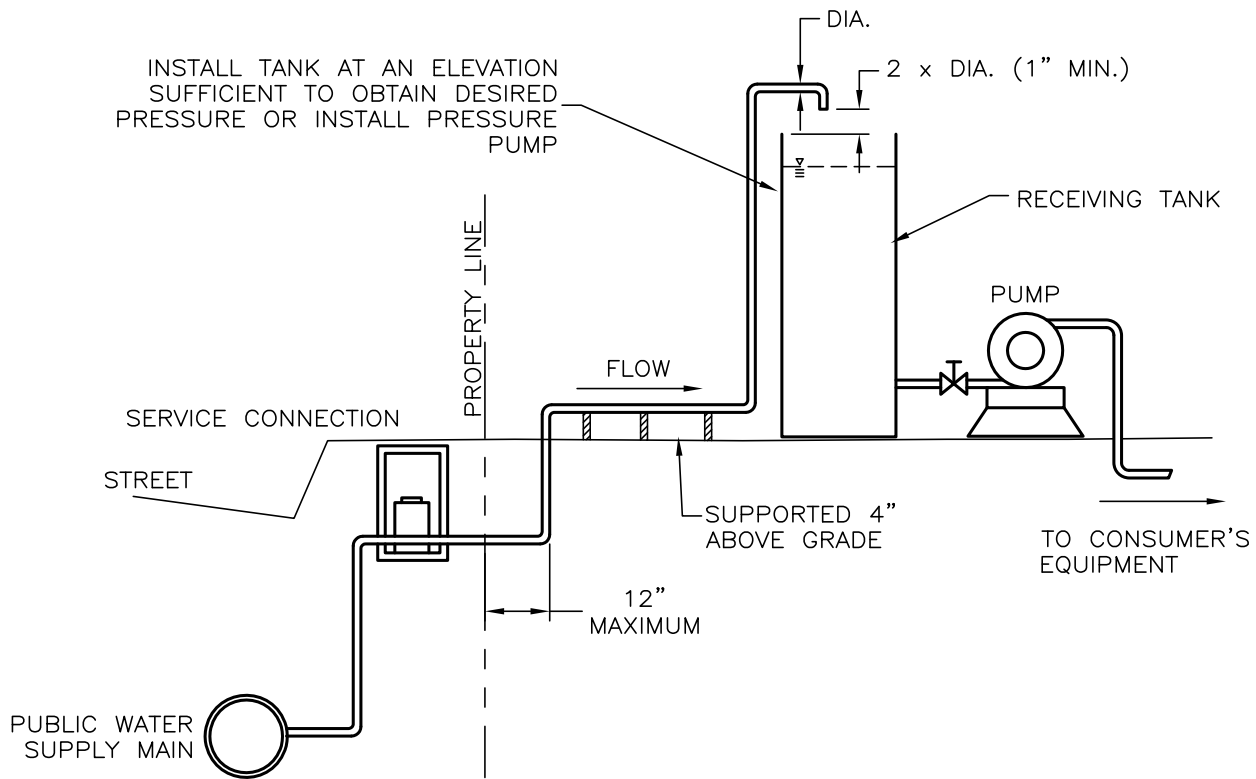
NOTES:

1. RP MUST BE ABOVE GRADE.
2. FREEZE PROTECTION (INSULATED ABOVE GROUND VAULT OR HOT BOX AND REDUNDANT HEAT TAPE) IS REQUIRED.
3. AN ABOVE GROUND VAULT (SUCH AS A PRECAST CONCRETE VAULT) MUST BE SIZED TO PROVIDE CLEARANCES SHOWN IN PLAN VIEW. A SPRING LOADED LID IS REQUIRED.
4. A HOT BOX LID MUST SWING CLEAR OF BACKFLOW PREVENTION ASSEMBLY TO PROVIDE CLEARANCES IN PLAN VIEW.
5. STOP AND WASTE VALVES MUST NOT BE USED BETWEEN THE METER AND THE BACKFLOW PREVENTION ASSEMBLY.
6. ABOVE GROUND VAULTS AND HOT BOX MUST PROVIDE ADEQUATELY SIZED DAYLIGHT DRAINS AT PAD LEVEL FOR DRAINAGE.
7. ELECTRICAL SUPPLY SOCKETS MUST BE AWAY FROM WATER RELIEF PORT AND TESTCOCKS.
8. THE BACKFLOW PREVENTION ASSEMBLY DEVICE MUST BE VISUALLY INSPECTED BY A CALIFORNIA / NEVADA AWWA OR ABPA CERTIFIED BACKFLOW TESTER AT THE TIME OF INSTALLATION, YEARLY THEREAFTER, AND AFTER REPAIRS, WITH THE RESULTS SENT TO THE WATER UTILITY.
9. NO OUTLET TEE, TAP OR CONNECTION SHALL BE INSTALLED BETWEEN SERVICE CONNECTION AND BACKFLOW PREVENTION ASSEMBLY.
10. REFER TO RELIEF VALVE DISCHARGE RATE SO THAT ADEQUATE DRAINAGE CAN BE INSTALLED.
11. SUPPORTS REQUIRED FOR ASSEMBLIES 2.5" AND LARGER.
12. INDOOR INSTALLATION OF BACKFLOW PREVENTION ASSEMBLIES (RP's) SHALL MEET INSTALLATION CLEARANCES OF NAC 445A.67235(6).

PAGE 2 OF 2

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			BACKFLOW PREVENTION ASSEMBLY (RP)	DATE: DRAFT
				DWG: B18

ELEVATION VIEW

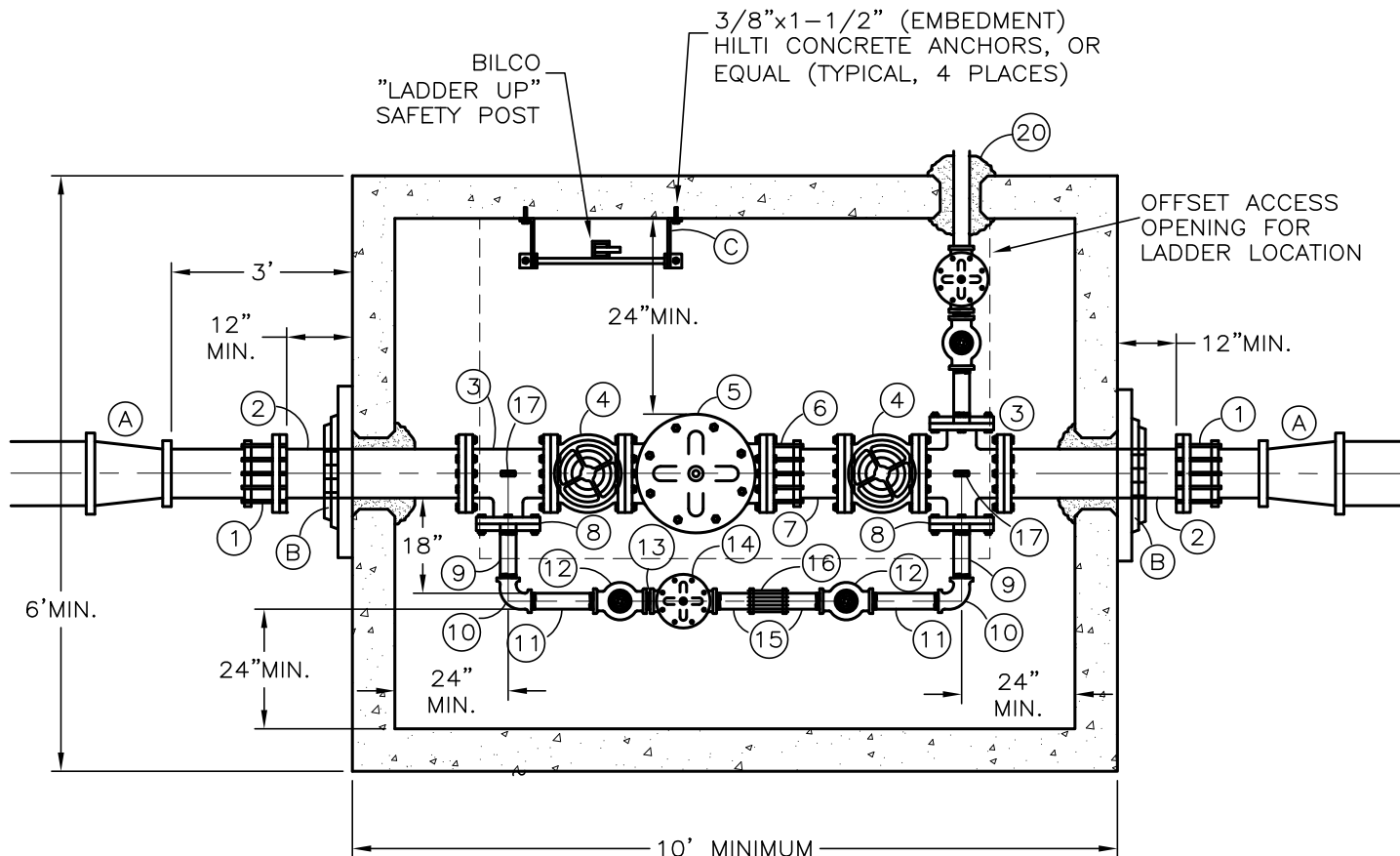


NOTES:

1. THE TANK SHOULD BE OF SUBSTANTIAL CONSTRUCTION AND OF A KIND AND SIZE TO SUIT CUSTOMER'S NEEDS. TANK MAY BE SITUATED AT GROUND LEVEL WITH A PUMP TO PROVIDE ADEQUATE PRESSURE OR BE ELEVATED ABOVE GROUND TO OBTAIN PRESSURE.
2. AN AIR GAP (VERTICAL PHYSICAL SEPARATION) OF AT LEAST 2 TIMES THE DIAMETER OF THE SUPPLY PIPE OR A MINIMUM OF 1 INCH MUST BE MAINTAINED BETWEEN THE LOWEST POINT OF THE SUPPLY PIPE AND THE WATER RECEIVING TANK.
3. FREEZE PROTECTION MUST BE PROVIDED FOR THE SUPPLY PIPE RISER THAT FILLS THE RECEIVING TANK AND THE TANK WHERE NECESSARY; DOMESTIC AND FIRE SERVICE MUST HAVE FREEZE PROTECTION, HOWEVER, IRRIGATION FREEZE PROTECTION IS OPTIONAL.
4. THE WATER METER WILL BE LOCATED UPSTREAM OF THE AIR GAP. NO OUTLET, TEE, TAP, CONNECTION TO OR FROM THE SERVICE LINE, OR STOP AND WASTE VALVE IS ALLOWED UPSTREAM ON THE AIR GAP ON THE SERVICE LINE.
5. IF THE AIR GAP IS INSTALLED IN AN AREA WHERE CORROSIVE FUMES OR GASES COULD RENDER THE ASSEMBLY INEFFECTIVE, A REDUCED PRESSURE PRINCIPLE MAY BE REQUIRED UPSTREAM.
6. THE AIR GAP MUST BE READILY ACCESSIBLE FOR VISUAL INSPECTION AND/OR UNIT REPAIR. ACCESS MAY REQUIRE THE REMOVAL OF AN ACCESS PANEL, DOOR, OR SIMILAR OBSTRUCTION.
7. THE AIR GAP MUST BE VISUALLY INSPECTED BY A CALIFORNIA/NEVADA AWWA OR ABPA CERTIFIED BACKFLOW TESTER AT THE TIME OF INSTALLATION, YEARLY THEREAFTER, AND AFTER REPAIRS, WITH THE RESULTS SENT TO THE WATER UTILITY.
8. THE AIR GAP MUST REMAIN OPERATIVE AND EFFECTIVE THROUGHOUT THE YEAR WITHOUT BEING BYPASSED. THE WATER UTILITY MUST BE NOTIFIED OF ANY BYPASSES USED FOR WHATEVER REASON.

PAGE 1 OF 1

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			<h1>AIR GAP SEPARATION</h1>	DATE: DRAFT
				DWG: B19



PLAN VIEW

A REDUCER WITH THRUST BLOCKS

B 10 INCH KNOCK-OUT SEAL WITH NON-SHRINK, DRY PACK GROUT. (TYPICAL BOTH ENDS)

NOTE:

1. PRE-ASSEMBLED PRE-TESTED PACKAGE SYSTEM PRODUCED BY HyDEC OR CONTRACTOR ASSEMBLED APPROVED EQUAL BY WATER UTILITY.
2. ACTUAL PRV STATION AND PLUMBING SHALL BE DESIGNED BY AN ENGINEER WITH THE COMPONENTS OUTLINED ON THIS DETAIL.
3. FINAL VAULT DIMENSIONS SHOULD PROVIDE A MINIMUM CLEARANCE OF 24" BETWEEN THE CONCRETE WALL AND ANY EXTERIOR PORTION OF PIPING OR VALVES INSTALLED IN THE DIRECTION PARALLEL TO THE PRIMARY PIPING.

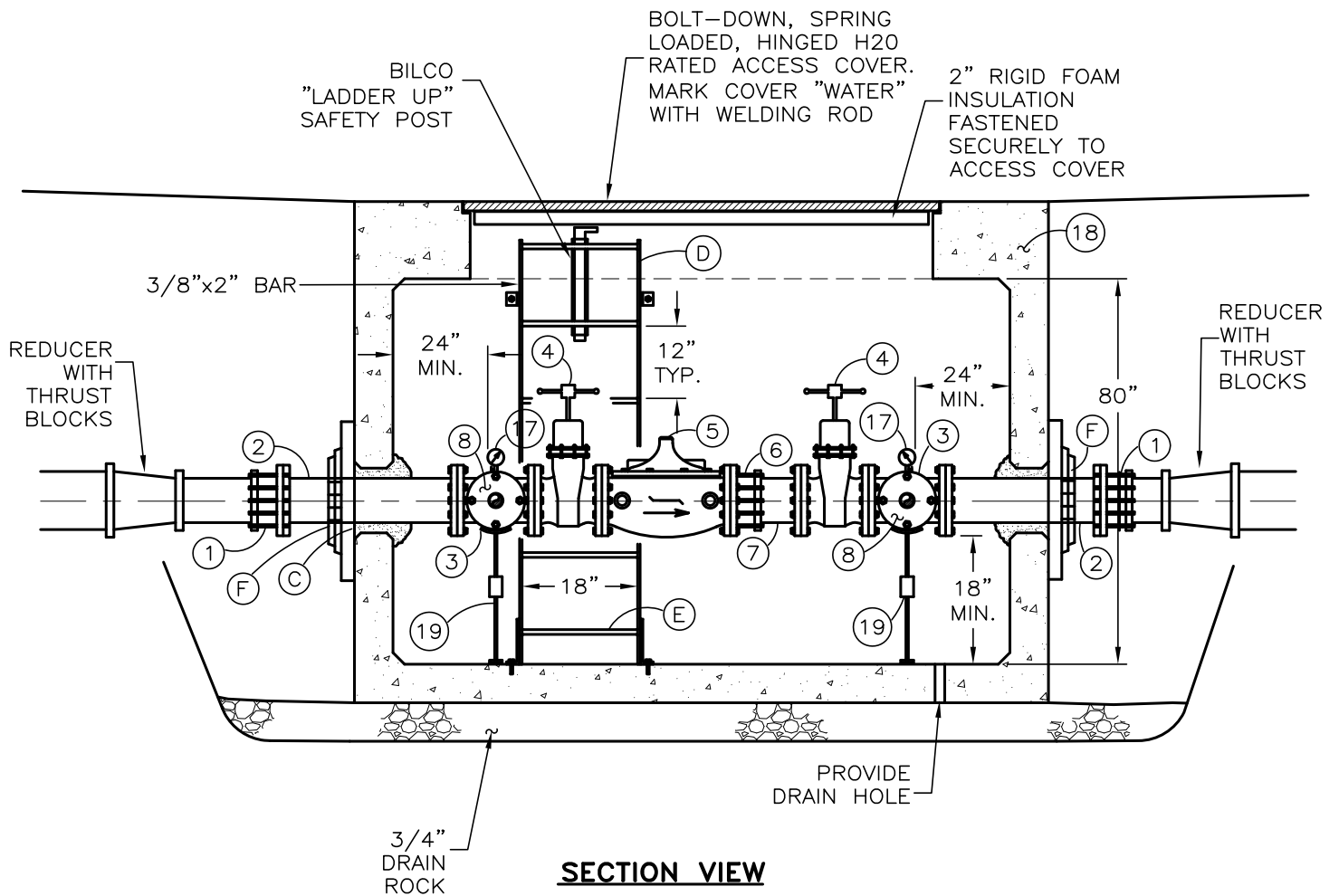
MAIN SIZE (INCHES)	MIN. BYPASS SIZE (INCHES)
8	3
10	3
12	4
14+	4

DETAIL CONTINUED ON PAGE 2

SEE NOTES ON PAGE 3

PAGE 1 OF 3

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			PRESSURE REDUCING STATION	DATE: DRAFT
				DWG: B20



C 10 INCH KNOCK-OUT SEAL WITH NON-SHRINK, DRY PACK GROUT. (TYPICAL BOTH ENDS)

D HOT-DIP GALVANIZE LADDER AFTER FABRICATION

E NO. 6 REBAR FOR STEPS. WELL ALL-AROUND TO UPRIGHTS

F EBAA MEGALUG SERIES 1100 OR APPROVED EQUAL

DETAIL CONTINUED FROM PAGE 1

SEE NOTES ON PAGE 3

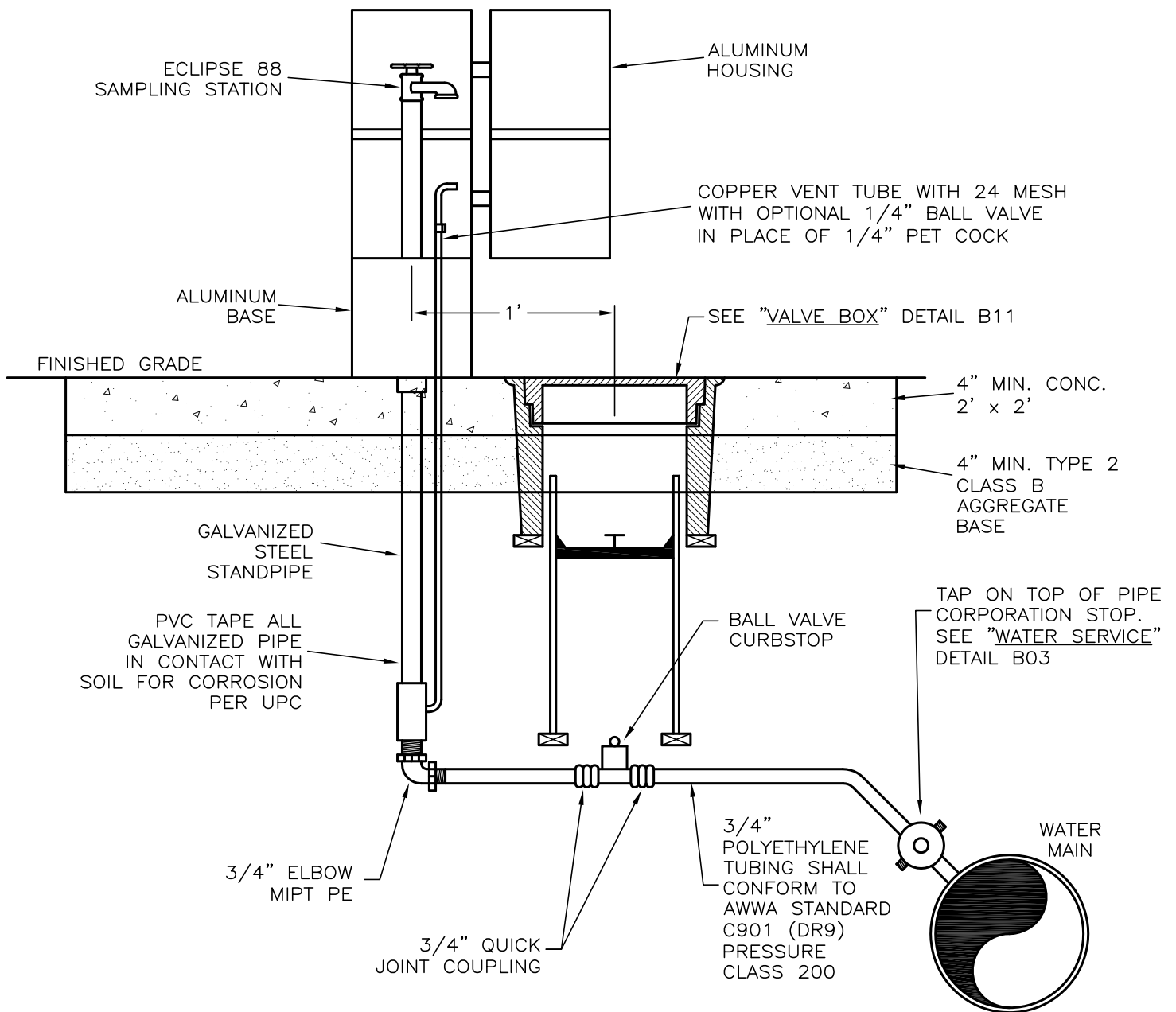
PAGE 2 OF 3

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			PRESSURE REDUCING STATION	DATE: DRAFT
				DWG: B20

ITEM NO.	QUANTITY	DESCRIPTION
①	2	COUPLING, ROMAC 501
②	2	DUCTILE IRON SPOOL, FLANGE x P.E.
③	2	FLANGED CROSS
④	2	FLANGE x FLANGE GATE VALVE, WITH HAND WHEEL OPERATOR
⑤	1	PRESSURE REDUCING VALVE, FLANGE x FLANGE, CLAYTON 91-01ACJ OR EQUAL, 125 LB. CLASS WITH 20 TO 200 PSI OPERATING RANGE.
⑥	1	COUPLING ADAPTOR, FLANGE x STEEL O.D. ROMAC FCA-501.
⑦	1	DUCTILE IRON SPOOL, FLANGE x P.E.
⑧	2	(FLANGE) x 2" (SCREWED) REDUCER
⑨	2	GALVANIZED NIPPLE, THREADED BOTH ENDS.
⑩	2	GALVANIZED 90° BEND (FEMALE THREAD).
⑪	2	GALVANIZED NIPPLE (THREAD BOTH ENDS).
⑫	2	GATE VALVE (SCREWED), WITH HAND WHEEL OPERATOR
⑬	1	GALVANIZED CLOSE NIPPLE
⑭	1	PRESSURE REDUCING VALVE, SCREWED ENDS, CLAYTON 91-01ACJ OR EQUAL, 125 LB. CLASS WITH 20 TO 200 PSI OPERATING RANGE.
⑮	2	SCHEDULE 40 GALVANIZED SPOOL, THREAD x P.E.
⑯	1	COUPLING ADAPTOR, ROMAC 511
⑰	2	BRASS COCK WITH 2 INCH BRASS NIPPLE, 3/8", 1/4 TURN BRASS AIR BLEED VALVE, AND 0 TO 200 PS PRESSURE GAUGE WITH SNUBBER, (ASHCROFT #1279 LIQUID FILLED GAUGE, OR APPROVED EQUAL).
⑱	1	JENSEN PRE-CAST VAULT, OR APPROVED EQUAL. PROVIDE 4' x 6' MINIMUM ACCESS COVER (TRAFFIC RATED COVER IS NOT REQUIRED IF LOCATED OUTSIDE OF ROADWAY AND PROTECTED BY PIPE BOLLARDS).
⑲	4	ADJUSTABLE PIPE SUPPORT WITH FLOOR FLANGE, GRINNELL #264 OR APPROVED EQUAL.
⑳	1	PRESSURE RELIEF DISCHARGE PIPE, LOCATION MUST BE APPROVED BY SERVICE PROVIDER.

PAGE 3 OF 3

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			PRESSURE REDUCING STATION	DATE: DRAFT
				DWG: B20



NOTES:

1. SAMPLING STATIONS SHALL BE 42" BURY, WITH 3/4" FIP INLET, AND 3/4" HOSE OR UNTHREADED NOZZLE.
2. ALL STATIONS SHALL BE ENCLOSED IN A LOCKABLE, NON-REMOVABLE, ALUMINUM-CAST HOUSING.
3. WHEN OPENED, THE STATION SHALL REQUIRE NO KEY FOR OPERATION, AND THE WATER WILL FLOW IN AN ALL BRASS WATERWAY.
4. ALL WORKING PARTS WILL ALSO BE OF BRASS AND BE REMOVABLE FROM ABOVE GROUND WITH NO DIGGING.
5. A COPPER VENT TUBE WILL ENABLE EACH STATION TO BE PUMPED FREE OF STANDING WATER TO PREVENT FREEZING AND TO MINIMIZE BACTERIAL GROWTH.
6. ECLIPSE No. 88 SAMPLING STATION SHALL BE MANUFACTURED BY KUPFERLE FOUNDARY, ST. LOUIS, MO, 63102.
7. THE SAMPLE TAP SHALL BE "SMOOTH NOSED".

PAGE 1 OF 1

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			ECLIPSE No. 88 SAMPLING STATION	DATE: DRAFT
				DWG: B21

WATER UTILITY GENERAL NOTES:

1. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS ADOPTED BY DOUGLAS COUNTY. THE OWNER / CONTRACTOR SHALL OBTAIN A PERMIT FROM DOUGLAS COUNTY COMMUNITY DEVELOPMENT PRIOR TO THE START OF CONSTRUCTION.
2. ALL TRAFFIC CONTROL AND BARRICADING WITHIN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND THE NEVADA WORK ZONE TRAFFIC CONTROL HANDBOOK, 1986 EDITION. NO STREET CLOSURES WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF A TRAFFIC CONTROL PLAN BY THE DOUGLAS COUNTY ENGINEERING DIVISION.
3. THE OWNER / CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT "CALL BEFORE YOU DIG" 1-800-227-2600 FORTY-EIGHT (48) HOURS PRIOR TO START OF CONSTRUCTION. AN UNDERGROUND SERVICE ALERT MAY ALSO BE LOGGED AT WWW.USANORTH.ORG.
4. THE OWNER / CONTRACTOR SHALL CALL DOUGLAS COUNTY ENGINEERING DIVISION (782-6237) FORTY-EIGHT (48) HOURS PRIOR TO START OF CONSTRUCTION. THE OWNER / CONTRACTOR SHALL CALL TWENTY-FOUR (24) HOURS PRIOR TO REQUIRED INSPECTIONS AND TESTING. THE REQUIRED INSPECTIONS AND TESTING ARE LISTED ON THE INSPECTION RECORD ISSUED WITH EACH PERMIT. THE OWNER / CONTRACTOR MUST HAVE THE PERMIT NUMBER AND THE DESCRIPTION LISTED ON THE INSPECTION RECORD TO SCHEDULE REQUIRED INSPECTIONS AND TESTING.
5. THE APPROVED PLAN, PERMIT AND INSPECTION RECORD MUST BE ON THE JOB SITE AT ALL TIMES.
6. WATER MAIN SHUTDOWNS / INTERRUPTION OF SERVICE: WATER UTILITY APPROVAL IS REQUIRED FORTY-EIGHT (48) HOURS PRIOR TO NOTIFICATION OF CUSTOMERS. COMMERCIAL AND RESIDENTIAL CUSTOMERS SHALL BOTH RECEIVE FORTY-EIGHT (48) HOURS WRITTEN NOTICE OF A SHUTDOWN, AND SPECIAL ARRANGEMENTS MAY HAVE TO BE MADE TO ACCOMMODATE CUSTOMERS OPERATIONAL NEEDS. THE WATER UTILITY IS RESPONSIBLE FOR THE NOTIFICATION WHEN WORK IS PERFORMED BY THE WATER UTILITY. THE CONTRACTOR IS RESPONSIBLE IN ALL OTHER CASES. A LIST SHALL BE KEPT BY THE RESPONSIBLE PARTY LISTING THE DATE, TIME, AND ADDRESS OF ALL PERSONS NOTIFIED. THE PERSON NOTIFIED SHALL BE INCLUDED ON THE LIST FOR ALL COMMERCIAL CUSTOMERS. THE CONTRACTOR WILL BE SUBJECT TO DAMAGE CLAIMS SHOULD THEY FAIL TO NOTIFY CUSTOMERS OR MAINTAIN DOCUMENTATION OF NOTIFICATION OF CUSTOMERS. THE CONTRACTOR SHALL NOT OPERATE ANY EXISTING WATER VALVES WITHOUT AUTHORIZATION OF THE WATER UTILITY.
7. ALL WATER MAINS SHALL BE C900, C905, DUCTILE IRON, AS SPECIFIED ON THE PLANS OR AS APPROVED BY THE WATER UTILITY. ALL WATER SERVICES 2" OR LESS SHALL BE CTS, PE PIPE (AWWA STANDARD C901); SERVICES 3" OR GREATER SHALL BE CLASS 150 C900 PVC OR AS SPECIFIED ON THE PLANS.
8. LINE SEPARATION MUST MEET THE PROVISIONS OF NAC 445A.6715 THROUGH 445A.6718 IN ITS ENTIRETY, NDEP'S VERTICAL CROSSING SUMMARY, AND BE APPROVED BY STATE AND WATER UTILITY.
9. ALL HOT TAPS ARE TO BE PERFORMED BY A LICENSED CONTRACTOR APPROVED BY THE WATER UTILITY. THE CONTRACTOR SHALL CONTACT THE WATER UTILITY AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO SCHEDULING HOT TAP DATE AND TIME.
10. WATER VALVE MARKERS SHALL BE BLUE CARSONITE UTILITY MARKER (CRM-3066), 5'-2" WITH WATER UTILITY'S DECAL OR APPROVED EQUAL. PLACE MARKER NO MORE THAN FIVE (5) FEET FROM THE VALVE OR AS DIRECTED BY THE WATER UTILITY.
11. ALL WATER MAIN AND WATER SERVICE INSPECTIONS MUST BE COMPLETED PRIOR TO ANY CERTIFICATE OF OCCUPANCY OR NOTICE OF COMPLETION BY THE WATER UTILITY ACCEPTING IMPROVEMENTS.

PAGE 1 OF 1

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			WATER UTILITY GENERAL NOTES	DATE: DRAFT
				DWG: B22